No. 717,665. PATENTED JAN. 6, 1903.

E. FABIAN & F. WIDMARK.

CAR COUPLING.

APPLICATION FILED APR. 4, 1902.

NO MODEL.

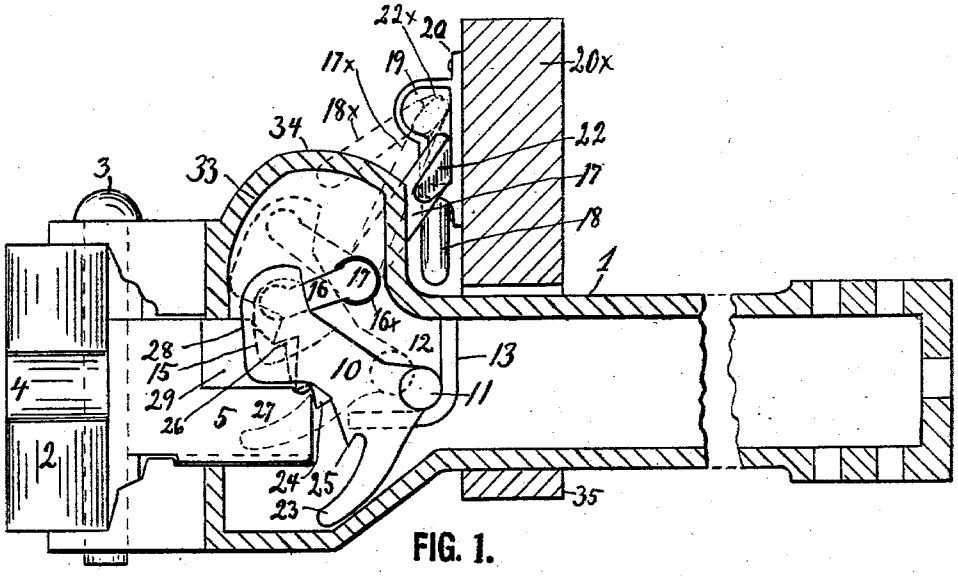


FIG. 1.

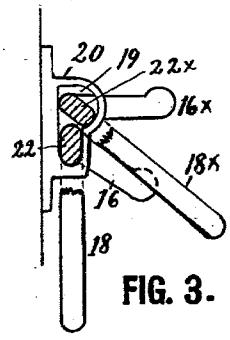


FIG. 3.

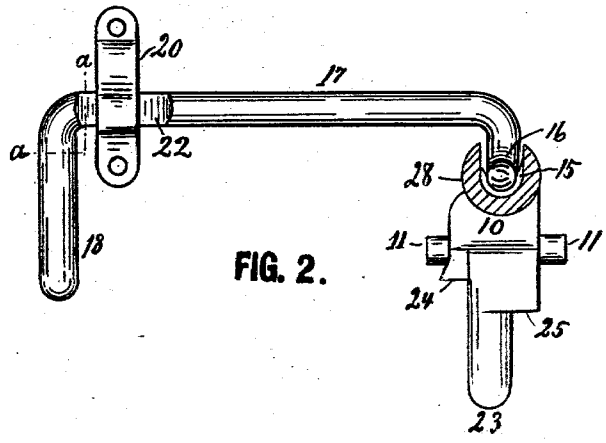


FIG. 2.

WITNESSES:

D. E. Carlsen.

A. E. Carlson.

INVENTORS:

Edwin Fabian,

Fredrik Widmark

BY their ATTORNEY:

A. M. Carlsen.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

EDWIN FABIAN AND FREDRIK WIDMARK, OF ST. PAUL, MINNESOTA.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 717,665, dated January 6, 1903.

Application filed April 4, 1902. Serial No. 101,352. (No model.)

To all whom it may concern:

Be it known that we, EDWIN FABIAN and FREDRIK WIDMARK, citizens of the United States, residing at St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Car-Couplings; and we do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to improvements in car-couplings, and has for its object the providing of improved means for coupling and uncoupling from the side of the cars. It is especially adapted to operate on a locking block and knuckle of a certain construction, which construction is therefore claimed as combined with said locking and unlocking device.

The invention is illustrated in the accompanying drawings, in which—

Figure 1 is a longitudinal vertical central section of a car-coupling embodying our invention. Fig. 2 is a front view of the operating-lever, its locking-bracket, and the locking-block, the latter with a small portion cut away near its top to expose the cavity in which the lever engages. Fig. 3 is a left-hand sectional end view of Fig. 2 on the line *a a* and with the lever shown in two positions.

Referring to the drawings by reference-numerals, 1 designates the body or draw-head and draw-bar of a coupling of the Janney type.

35 is a stirrup supporting the coupling.

2 is the knuckle, pivoted on the pin 3 and having the tail 5, provided with a vertical face 29 and two hollow shelves 26 and 27 for the projections or short arms 24 and 25 of the locking-block 10 to rest on when said block is to be held elevated with its head 28 above the locking-face 29, as shown in dotted lines in Fig. 1, preparatory to pulling the cars apart. Said locking-block 10 is provided at each side with a trunnion 11, resting normally on a rib 13, having a vertical and a horizontal arm, behind and below which the trunnions cannot move; but they may move forward and upward in the spaces 12 in front of the vertical arm of the rib.

Inserted through an aperture $16^{\times}$ in the side of the draw-head is a rock-shaft 17, (often called "the lever," because it has a lever at one or both ends.) This rock-shaft is provided at its inner end with a short arm 16, engaging in a cavity 15, opening from the rear side of the head 28 of the locking-block, while the outer end of the rock-shaft is provided with a handle or lever 18 and near said lever with a flat portion 22, which rests in the aperture 19 of a bracket 20, secured to a suitable part $20^{\times}$ of the car, so that the lever may be reached without stepping in between the ends of the cars. It will be observed that said aperture 19 is P-shaped, so that when in the operation of the device the lever 18 is permitted to hang about plumb down by its gravity the flat portion of the shaft falls down into the lower and narrow part of the aperture and is thereby locked against accidental turning and unlocking of the locking-block. If the knuckle is to be thrown open by the locking-block and lever, the operator takes hold of the lever 18, lifts the shaft up into the upper and wider part of the slot 19, then turns it so that the short lever-arm 16 pulls the locking-block upward and forward until its tail 23 ejects the tail of the knuckle, as is more fully explained in our application filed February 20, 1902, Serial No. 95,002. If the block 10 is simply to be raised preparatory to pulling the cars apart, then the flat portion 22 of the shaft is turned into the position $22^{\times}$ in Figs. 1 and 3, so that the projections 24 25 of the locking-block catch upon the shelves 26 27 of the knuckle-tail, which, catching, holds the head of the block unlocked or above the knuckle-tail and also prevents the shaft 17 from turning, so that it can drop down into the narrow portion of the slot 19 until the cars pull apart, when, the knuckle-tail being swung out thereby, the locking-block and lever drop back to the normal position. (Shown in black lines in Fig. 1.)

It will be understood that the mouth of the cavity or pocket 15 in the locking-block is of suitable vertical height to permit the block to tilt upward and let the knuckle-tail pass into the locked position without turning of the rock-shaft 17, as will be found more fully de-

scribed and claimed in our application, filed February 20, 1902, Serial No. 95,002.

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

1. In a car-coupling the combination with a draw-head and a knuckle pivoted therein, the latter having shelves on its tail for the locking-block to rest on when in an unlocked position while the knuckle is closed, with a locking-block having side trunnions with a play in longitudinal direction of the coupling, and a pocket in the rear side of its head, a rock-shaft journaled in one side of the draw-head and in an aperture in a bracket secured on the end of the car; said rock-shaft having a normally downward-hanging operating-lever on its outer end, and its inner end formed with a short arm engaging in the pocket of the locking-block to lift and impel it forward; said aperture in the bracket being P-shaped or enlarged at its top, and the part of the shaft resting therein being flat, substantially as and for the purpose set forth.

2. In a car-coupling the combination with a draw-head and the knuckle pivoted therein, the latter having shelves on its tail for the locking-block to rest on when in an unlocked position while the knuckle is closed, with a locking-block having side trunnions with a play in longitudinal direction of the coupling, a rock-shaft journaled in one side of the draw-head and in an aperture in a bracket secured on the end of the car, said rock-shaft having a normally downward-hanging operating-lever on its outer end, and its inner end formed with a short arm pivotally engaging the head of the locking-block, to lift and impel it forward; said aperture in the bracket being P-shaped or enlarged at the top, and the part of the shaft resting therein being flat, so that the shaft cannot assume its normal position as long as the knuckle-tail supports the locking-block.

In testimony whereof we affix our signatures in presence of two witnesses.

EDWIN FABIAN.
FREDRIK WIDMARK.

Witnesses:
A. M. CARLSEN,
D. E. CARLSEN.