(No Model.)

3 Sheets—Sheet 1.

M. A. KNOWLES.

CAR COUPLING.

No. 604,586. Patented May 24, 1898.

FIG. 1.

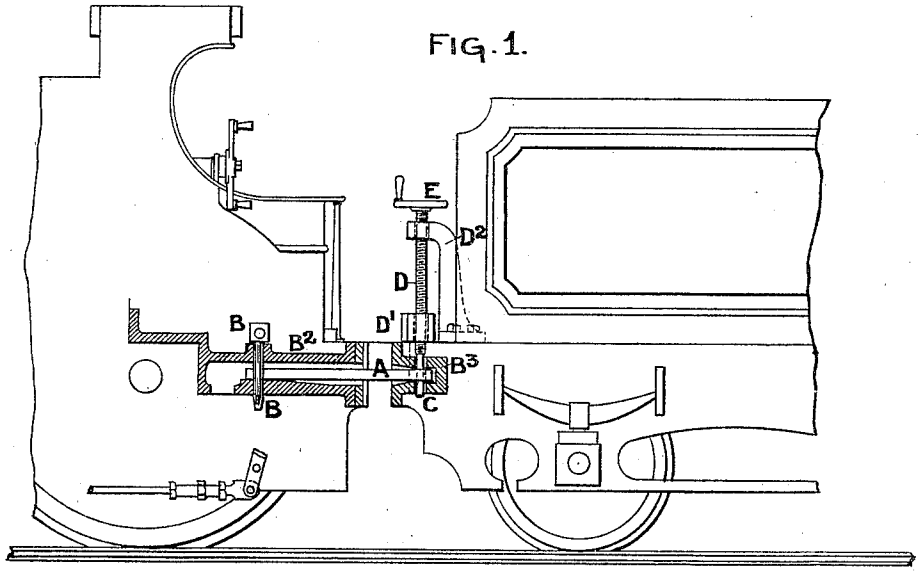
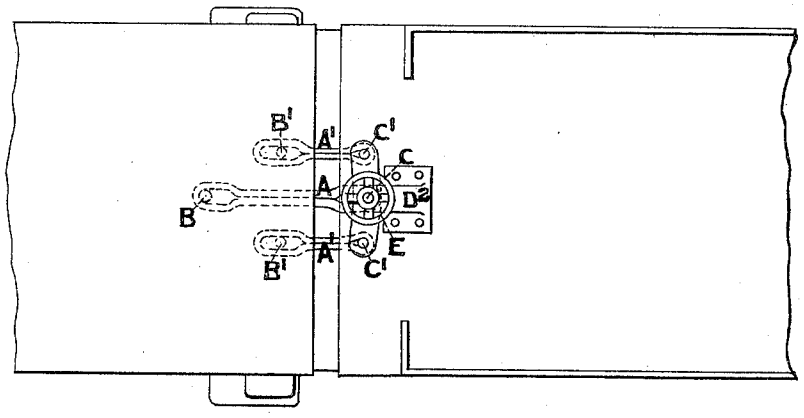


FIG. 2.

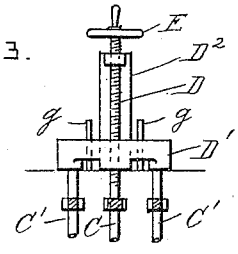


Witnesses

John E. Walsh

Allan Bennett.

FIG. 3.



Inventor

Mary Ann Knowles.

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

(No Model.) 3 Sheets—Sheet 2.

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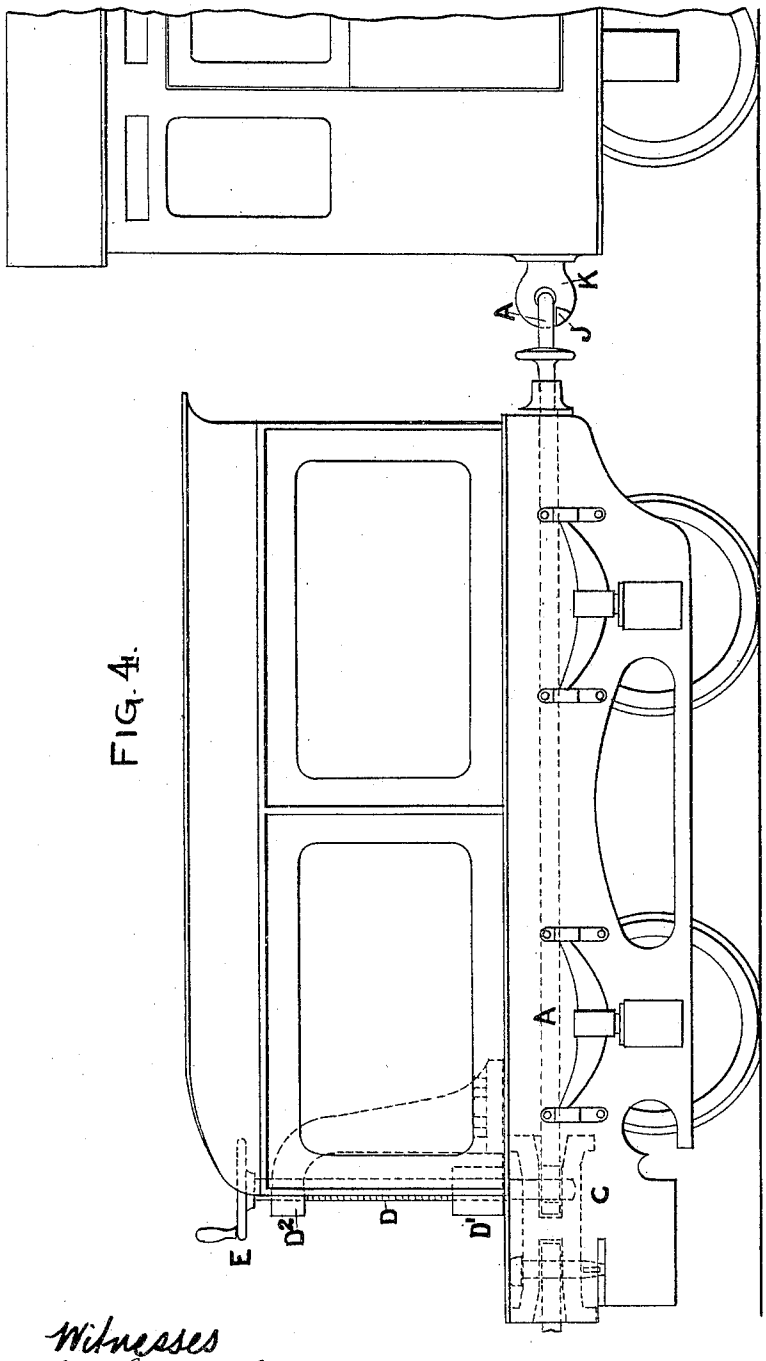


FIG. 4.

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(No Model.)

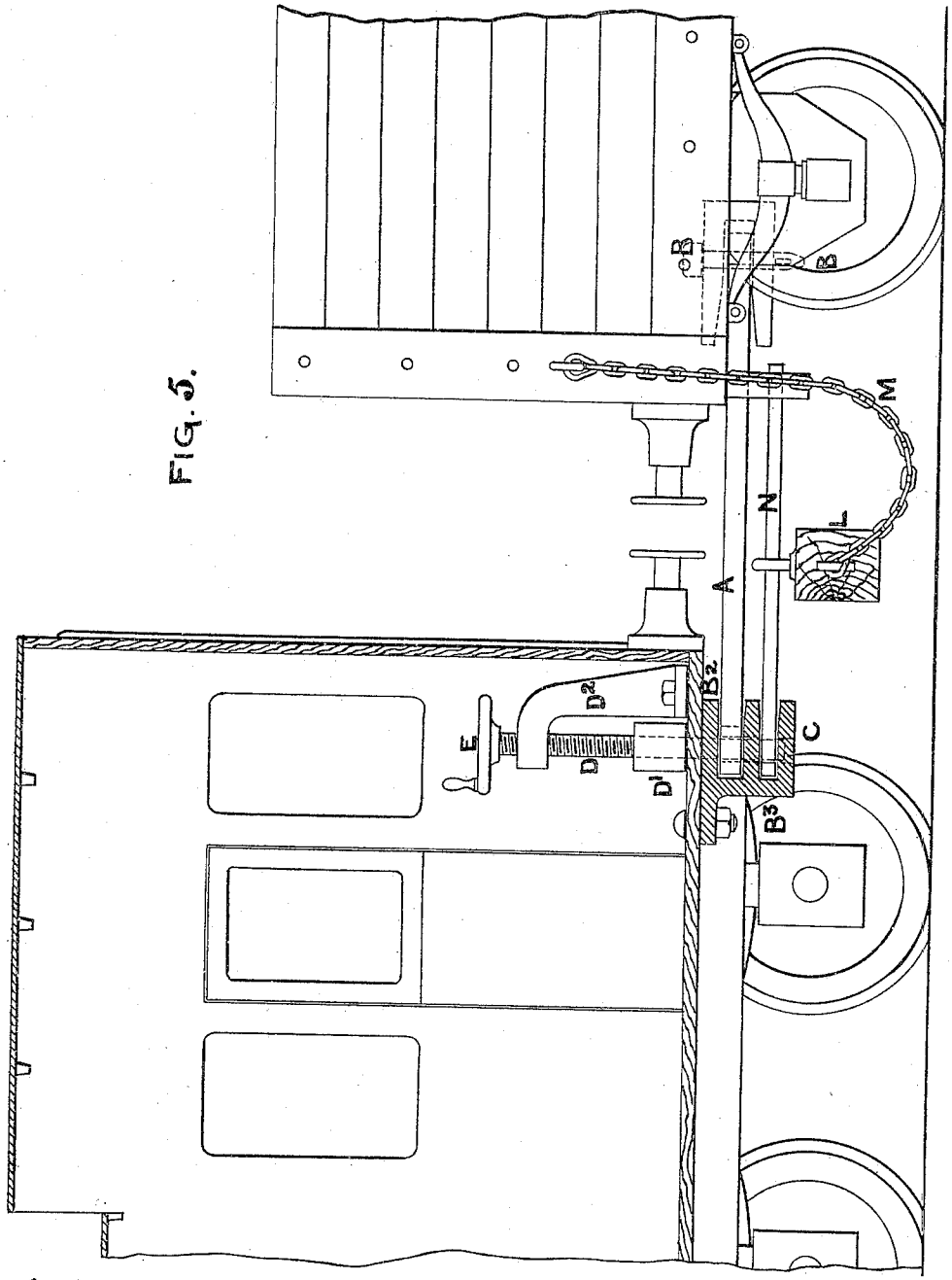
3 Sheets—Sheet 3.

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CAR COUPLING.

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FIG. 5.



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UNITED STATES PATENT OFFICE.

MARY ANN KNOWLES, OF BAILDON, ENGLAND.

CAR-COUPLING.

SPECIFICATION forming part of Letters Patent No. 604,586, dated May 24, 1898.

Application filed November 1, 1897. Serial No. 657,090. (No model.) Patented in England December 17, 1896, No. 28,898.

To all whom it may concern:

Be it known that I, MARY ANN KNOWLES, a subject of the Queen of Great Britain, residing at Baildon, in the county of York, England, have invented new and useful Improvements in Car-Couplings, (for which I have obtained a patent in England, No. 28,898, dated December 17, 1896,) of which the following is a specification.

The object of my invention is to give drivers of engines and guards of trains and locomotives more complete control thereof, and in cases where a collision between an express or passenger and another train is otherwise bound to occur the engine-driver may release the engine and save his train and the guard of the other train may release his truck behind his van and save the rest of his train. To acquaint the guard in such cases of emergency, it will be necessary to have an extra signal-light—for instance, a royal-blue or a double-red light.

Figure 1 is a front elevation, partly in section, of ends of engine and tender with my releasing arrangement under command of the engine driver and stoker. Fig. 2 is a plan of Fig. 1. Fig. 3 is an end elevation of releasing mechanism detached. Fig. 4 is a front elevation of tender and part of first carriage with releasing-gear of same. Fig. 5 is a front elevation of guard's van and part of luggage-van with releasing-gear for same and block.

I employ under the engine and connected to the tender ordinary coupling bars or links A A′ A′, secured by pins and cotters B B′ B′ within a receiver B^2 upon the engine and by pins C C′ C′, screw D, foot-bracket D′, hand-wheel E, bracket D^2, and receiver B^3 upon the tender. Thus by turning the hand-wheel one way the fastening-pins C C′ C′ are withdrawn and the tender can be released from the engine. (See Figs. 1, 2, and 3.) The screw D, which carries the pin C, engages with the stationary bracket D^2 and also with the vertically-slidable bracket D′, which carries the pin C′. The bracket D′ slides upon vertical guides *g*. (Shown in Fig. 3.) Fig. 4 shows method of disengaging the tender from the first carriage by a similar arrangement; but the coupling-bars A are longer, as they pass under the whole length of the tender to the first carriage and are linked to the draw-hook K of the first carriage.

J is a rest upon the draw-hook to prevent the bar from dropping when released and so plowing up the road or track.

If required, the draw-hooks and coupling-bars, with receivers, may be duplicated one above the other and the pins on the screw lengthened accordingly.

Any of the same appliances may connect the guard's van to a wagon behind it, which may also be provided with a block of india-rubber, wood, or other suitable material L, suspended crosswise by rod N, so that when the wagon is uncoupled the guard may, if he thinks it necessary, (or is so signaled by the extra royal-blue signal or double red,) simultaneously drop the block L across the rails between his van and the wagon. The block L may be attached to chains M to insure it dropping across the rails. The dropped block L impedes the wagon, preventing it from following the train, and blocks the line, or it may throw the wagon off the line and so prevent the engine of the express from running into the passenger-train, thereby saving life by sacrificing the truck behind the van. When coupled up, the winged nut or hand-wheel is screwed up and draws and locks the bar in position.

What is claimed as the invention, and desired to be secured by Letters Patent, is—

1. The combination, with a stationary bracket, a vertically-slidable bracket, and guides for the said slidable bracket; of a revoluble screw engaging with both the said brackets, coupling-pins carried by the said slidable bracket and screw respectively, and a receiver and links engaged by the said pins, substantially as set forth.

2. The combination, with a receiver at the front of a tender, of a rod extending under the tender and connected to the carriage behind it, a retractable pin coupling the said rod and receiver, and a support on said carriage preventing the said rod from striking the ground when no longer supported from the tender, substantially as set forth.

3. The combination, with receivers attached to two adjacent carriages, and a coupling-bar connecting the two receivers; of a

rod N supported by the receiver on the front carriage, means for disengaging the said bar and rod at one operation from the receiver to which they are connected, a block carried by the said rod, and flexible connections attached to the said block and to the rear carriage, whereby the block falls in front of the wheels of the rear carriage when the said rod and bar are disengaged from the receiver on the front carriage, substantially as set forth.

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

MARY ANN KNOWLES.

Witnesses:

JOHN E. WALSH,

ALLAN BENNETT.