

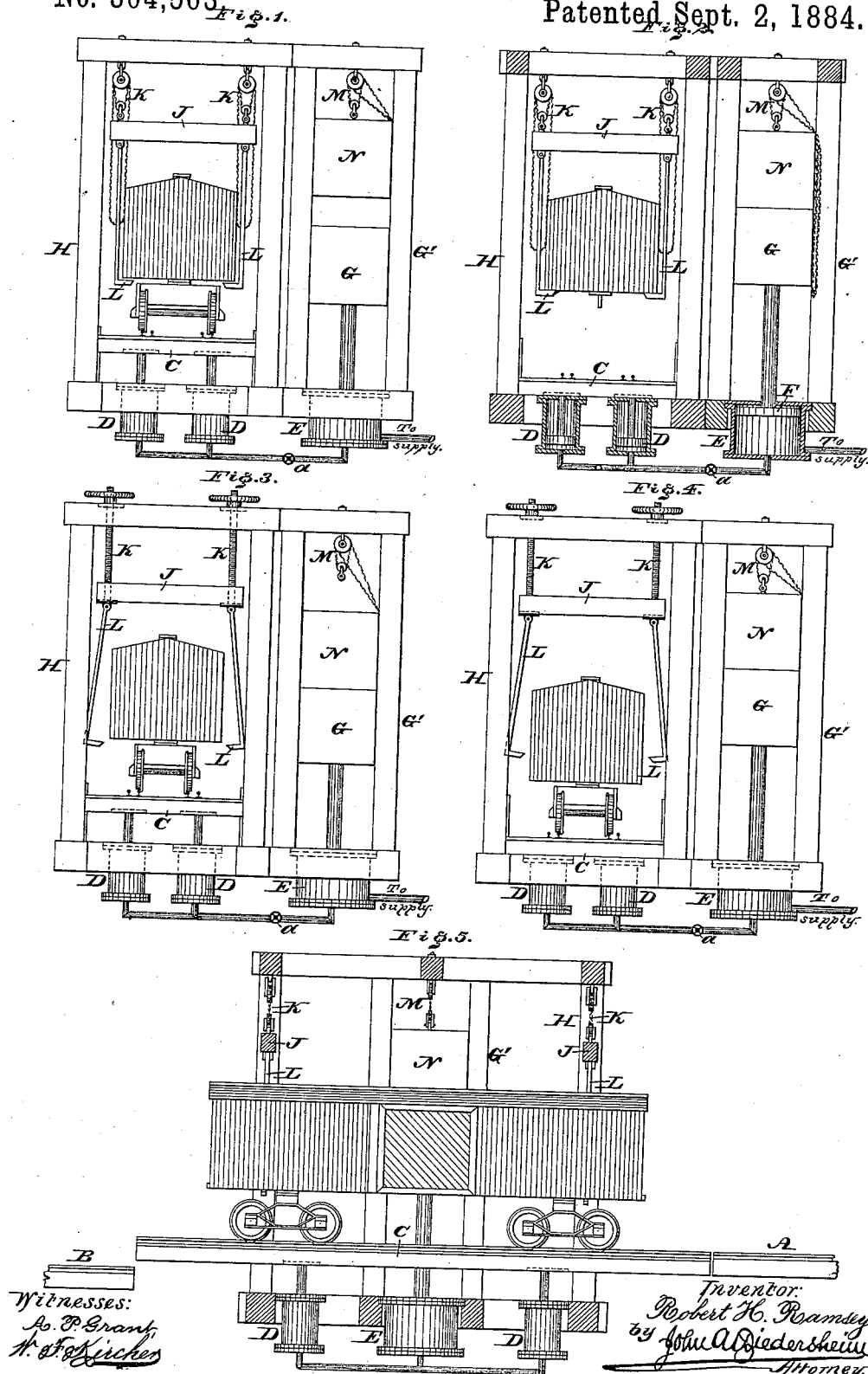
(No Model.)

R. H. RAMSEY.

CAR AND FREIGHT TRANSFER APPARATUS.

No. 304,563.

Patented Sept. 2, 1884.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

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## CAR AND FREIGHT TRANSFER APPARATUS.

SPECIFICATION forming part of Letters Patent No. 304,563, dated September 2, 1884.

Application filed February 18, 1884. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT H. RAMSEY, a subject of the Queen of Great Britain, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Car and Freight Transfer Apparatus, which improvement is fully set forth in the following specification and accompanying drawings, in which—

10 Figure 1 is an end view of apparatus embodying my invention. Figs. 2, 3, and 4 are end views showing the operation of the apparatus, Fig. 2 being partly sectional. Fig. 5 is a partial side elevation and partial vertical

15 section thereof. Similar letters of reference indicate corresponding parts in the several figures.

My invention consists of means for conveniently transferring cars from one railroad to another of a different gage, and for transferring freight from car to car, the operation, in the main, being automatic, as will be hereinafter fully set forth.

Referring to the drawings, A and B represent railroad-rails at different levels forming a step, and adapted for broad and narrow gage railroads, the ends of said rails being separated, and between them is fitted a vertically-movable table, C, on which are laid railroad-rails for broad or narrow gage railroads, which are in continuity with the rails A or B, according to the position of the table. The table C is supported on the pistons of hydraulic cylinders D, which are properly supported in a

35 pit, and in communication with an accumulator, E, which is also properly supported, and having a weighted piston, F, the weight G thereof being guided in a frame, G', which is located adjacent to a frame, H, from which are

40 suspended the beams J, occupying a position above the car-body, the means of suspending said beams being the differential or other pulleys K, as in Figs. 1, 2, and 5, or the screws K, as in Figs. 3 and 4.

45 Depending from the beams J are pivotal arms L, whose lower ends are hooked in order to engage with the car-body for sustaining the same, the object whereof being hereinafter more fully described.

50 Attached to the upper part of the frame G' is a differential or other pulley, M, or a screw, if desired, which is adapted to be attached to a

supplemental weight, N, which is fitted to the frame G', and overhangs the weight G.

In order to transfer a car-body to trucks of different gage the operation is as follows: The car is run from the upper level or rails, A, on the table C, as seen in Fig. 5, the position of parts being also shown in Fig. 1. The arms L are then moved toward the car-body, so that the hooks thereof are beneath said body and tighten the chains of the pulleys K, so that the arms L remain securely in position. The valve *a* between the cylinders D and accumulator is now opened, the table with the superimposed trucks are permitted to descend to the lower level or rails, B, the water, the glycerine, or other fluid employed being forced from the cylinders into the accumulator, thus raising the weight G. The trucks are removed, the parts being in position shown in Fig. 2, the valve *a* having been closed to prevent the return of the table. The trucks of a different gage are now substituted and placed on the table C and the chain of the pulley M slackened, so that the weight N is placed on the weight G, said chain then being disengaged from the weight N. The valve *a* is again opened and both weights N & G are permitted to descend, thus returning the fluid from the accumulator into the cylinders and causing the ascent of the table, the trucks thus reaching the car-body, the valve *a* being again closed. Now slacken the chains of the pulleys or the screws K and release the hooked arms L, (see Fig. 3,) after which open the valve *a*, when the weight of the car causes the table to descend to the lower level and raises both weights G & N, as seen in Fig. 4. The valve *a* is now closed and the car run from the table A on the lower level or rails, B, by which it may be directed to its destination. The hook of the pulley or screw M is next connected with the weight N, thus controlling the latter, and the valve *a* opened, and the weight G, which is sufficient to raise the empty table C, descends, thus elevating said table and placing it in communication with the upper level or rails, A, ready for the next car and repetition of the operations hereinbefore stated.

Referring to Fig. 3, where both weights are shown lowered and the trucks of a different gage raised to the car-body and connected therewith, the car may at this point be re-

turned to the upper level or rails, A, whence it came, or a track on a similar level. In this case the trucks of the next car that may be run on the table to be transferred will not be heavy enough to lower the table, on account of both weights being down. To provide for this the chain of the pulley is lowered and connected with the upper weight, N, and then operated to raise said weight clear of the other weight, thus relieving the table of the controlling influence of the upper weight.

In lieu of the pulley M for raising the upper weight, I may employ the supply pump of the cylinders to force fluid from said cylinders to the accumulator, and thus raise both weights, after which the upper weight is connected with the pulley M and the lower weight permitted to descend to its normal position.

Should it be desired to transfer the load of a flat or gondola car to another car, the load may be held by the chains of the pulleys K, and the car then lowered, similarly to the trucks previously described, and run off on the lower level rails. Another car is then placed on the table A and raised to the upper level, or the table raised and a car from the upper level run thereon, after which the load is lowered on the substituted car, and the latter may be directed elsewhere on the upper or lower level rails, as desired, it being necessary to operate the parts to locate the table in line with the upper or lower level, as desired.

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

1. In a transfer apparatus, a step in a track, a vertically-movable table or support for a car

between the same, fluid-containing cylinders with pistons on which said table is rested, an accumulator in communication with said cylinders, and a weight superimposed on the piston of the accumulator, in combination with an auxiliary weight located above the other weight and supported independent thereof, the two weights operating in harmony, substantially as and for the purpose set forth.

2. A transfer apparatus consisting of a step in a track, a vertically-movable table or support for a car between the same, fluid-containing cylinders with pistons on which said table is rested, an accumulator in communication with said cylinders, a weight superimposed on the piston of the accumulator, an auxiliary weight supported independently of the other weight and adapted to be superimposed thereon, and means for sustaining the car-body or load independently of the aforementioned table or support, substantially as and for the purpose set forth.

3. A table vertically movable between rails of different levels, and fluid-containing cylinders sustaining said table, an accumulator with a weighted piston communicating with said cylinders, and an auxiliary weight, in combination with devices for supporting a car-body or load, means for sustaining said devices and raising and lowering the same, and means for sustaining the auxiliary weight and raising and lowering the same, substantially as and for the purpose set forth.

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