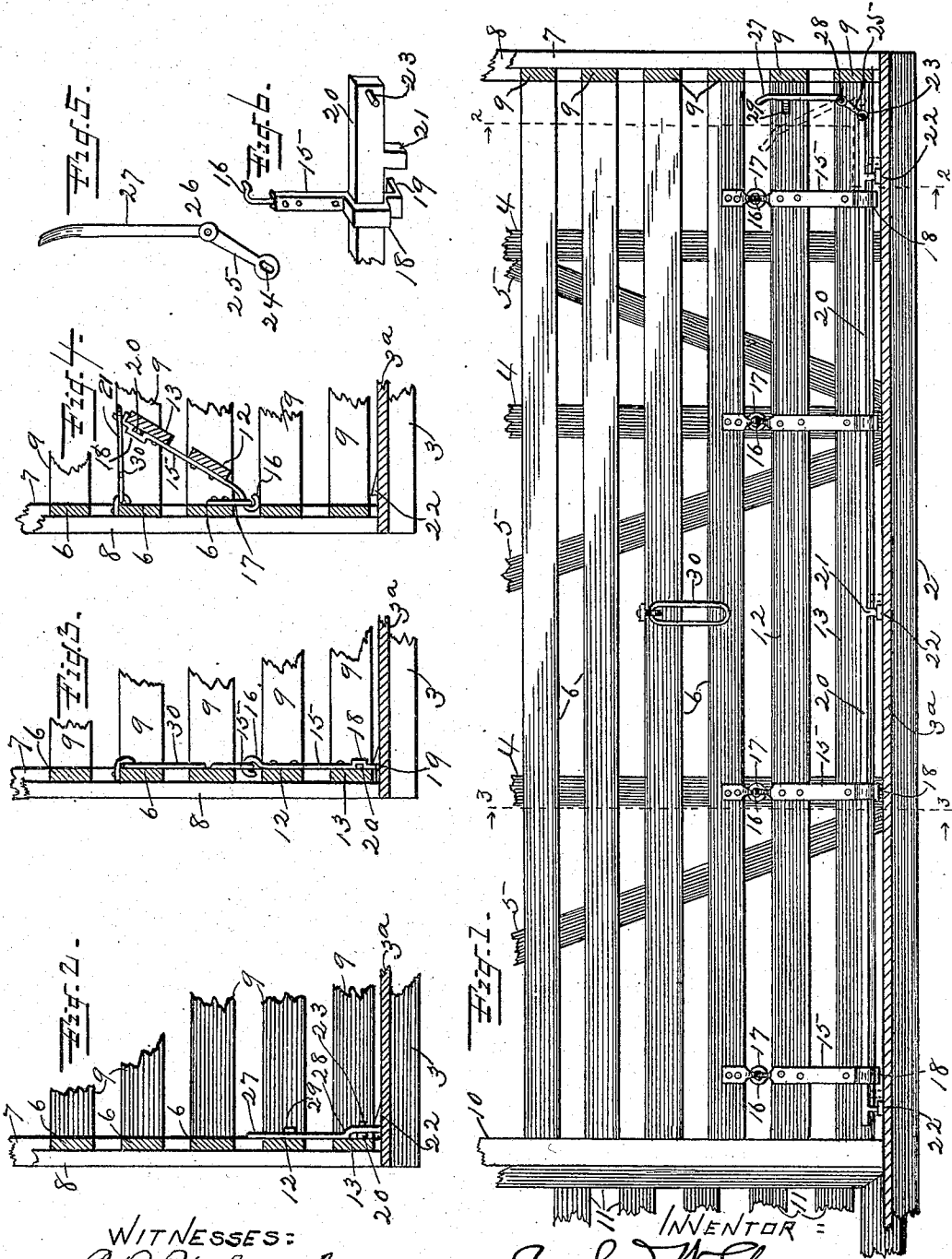


J. W. SLAVEN.
RAILWAY CAR.

APPLICATION FILED DEC. 10, 1907.

937,106.

Patented Oct. 19, 1909.
2 SHEETS—SHEET 1.



WITNESSES:
S. R. Richards.
J. M. Boston.

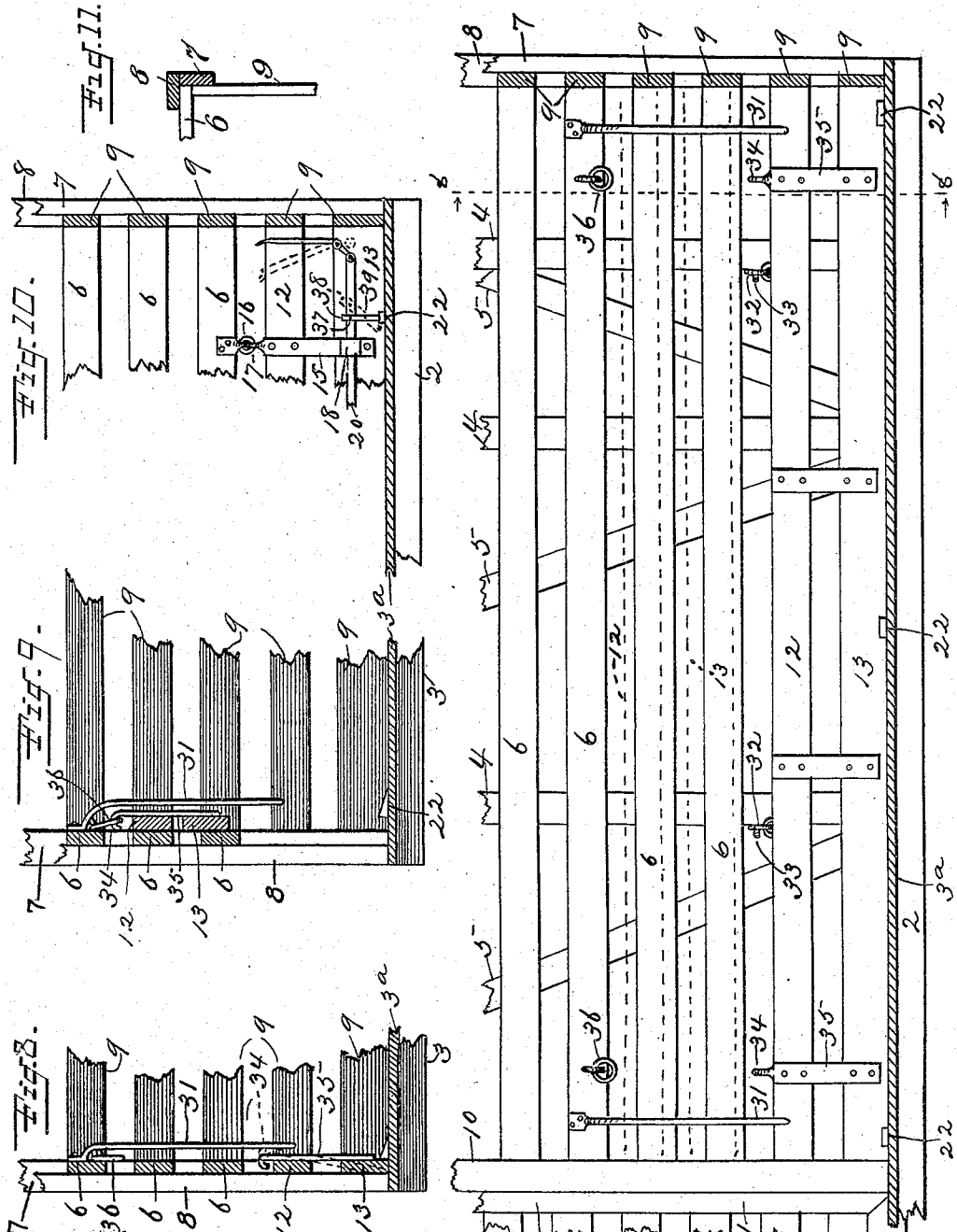
INVENTOR:
John W. Slaven,
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B. R. Richards.
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INVENTOR:
John W. Slaven.
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UNITED STATES PATENT OFFICE.

JOHN W. SLAVEN, OF GALESBURG, ILLINOIS, ASSIGNOR OF ONE-HALF TO FRANK M. CONNOLLY, OF GALESBURG, ILLINOIS.

RAILWAY-CAR.

937,106.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed December 10, 1907. Serial No. 405,943.

To all whom it may concern:

Be it known that I, JOHN W. SLAVEN, a citizen of the United States, and a resident of Galesburg, in the county of Knox and State of Illinois, have invented a new and useful Railway-Car, of which the following is a specification.

My invention relates to railway cars, and particularly to that class or type thereof known as stock-cars or cattle-cars. This sort of car is used largely in transporting cattle, hogs, horses, sheep and other animals great distances. They become very foul and require frequent cleaning, but because of the difficulty of shoveling the litter and excrement from the ends of the car to the side door thereof, and of the expense attached thereto, are often permitted to remain in a putrid, offensive and contaminating condition. The odor arising from the cars is repellent and disease-breeding, especially when the cars are sent to way-stations and stand for hours on a side-track, in which event there are usually residences, hotels and a depot or station close by. It is difficult to remain in a car where a large quantity of the "sweating" mass has been partly stirred up in the operation of cleaning, particularly if a considerable amount of time has elapsed since the car was cleaned and the cattle have trampled it into a dense and rotting cake.

The principal object of the invention is to provide means whereby said fetid and putrefying (or other) matter may be readily and quickly removed from the car without carrying it shovelful by shovelful to the door or by pitching it a long distance into a pile near the door and then again shoveling it to remove it from the car.

Another object of the invention is to furnish such means of such construction and assemblage that there will be no part thereof projecting to such extent that an animal might be injured thereon.

As cars are now constructed it is practically impossible to clean them while they are in transit.

A further end and object is to provide a construction whereby such cleaning in transit may be successfully and economically practiced. All cars of this character are provided with end-doors; it will be evident that the employee may clean one car and enter the next by means of these doors while the cars are traveling on the road, the litter

being scattered from the side openings, in small quantities where it will not only be inoffensive but will serve as a fertilizer at the sides of the road-bed or track, and as land is now cultivated at such points, the feature is a valuable one. A great saving in the number of cars required will be effected by the use of the device, as the cars which would otherwise remain at a station, dumping ground or stock-yard while being cleaned may now be purified while on the road to the shipping point.

In times of unusual activity on railroads, cattle cars are frequently utilized for shipping brick, pig-iron and many other articles of great weight and small dimensions. It will be quite apparent that these have to be carried in at the side door and thence to the ends of the car, as cars are now constructed. It will further be evident that such materials may, in cars equipped with my improvements, be readily loaded very close to or even at the point where they are to be piled, and that they may be as readily unloaded, especially when the modification shown at Figure 7 is employed.

Other objects of my improvements consist in novel structural features and combinations of devices, the operations of which devices separately and in combination will be found hereinafter fully described, and the novel combinations of which devices are pointed out in the claims hereto appended.

Mechanism showing the structural features, arrangement, connection and mutual relationship of the several parts of my improvements, and the adjacent parts of a stock-car in which the improvements are incorporated, is illustrated in the accompanying drawings, in which:—

Fig. 1 is an elevation, partly in section, seen from the inside, of the right hand side of one side portion of a stock-car, partly broken away, a preferred construction of my improvements shown as embodied therein, the parts being in normal or closed position; Fig. 2, a vertical section in the line 2—2 in Fig. 1; Fig. 3, a vertical section in the line 3—3 in Fig. 1, the gate being in closed position; Fig. 4, a similar section in the same line as is Fig. 3, but the gate raised as for cleaning the car; Fig. 5, a side elevation of the lever; Fig. 6, a perspective, showing the shifting bar and the cleat, keeper and hinge member; Fig. 7, a view similar to that in

Fig. 1, but a modification of the device there shown, the gate being shown by full lines in normal and by dotted lines in raised position; Fig. 8, a vertical section taken in the line 8—8 in Fig. 7; Fig. 9, a vertical section in the same line as Fig. 8, but showing the gate raised as for cleaning; Fig. 10, a modification of the locking device; and Fig. 11, a detail, a top plan.

The same reference numeral wherever herein used refers to the same or a similar part in the several figures of the drawings, 2 indicating the side sill, 3 the end sill, 3^a the floor, 4 the vertical side posts, 5 the inclined braces, 6 the slats of the sides, 7 and 8 the corner posts, 9 the slats of the ends, 10 the side-door casing and 11 the side-door of a stock-car, but as these may be of any preferred and suitable construction and are not specifically herein claimed, they will not be more fully described than to state that the lower slats which are usually fixed to the posts and braces (as are those shown) are omitted, their places or positions being supplied by the slats of my gate, which in normal position constitutes a section of the car side.

The slats 12 and 13 of the gate are fixed together by cleats or straps 15, the upper portion of each of which is provided with a hook 16 which engages an eye 17 fixed to the lower slat 6 and together with said hook constitutes a simple hinge. The lower portion of each strap is bent to form a keeper 18 for the shifting bar hereinafter described, and is thence bent downwardly and inwardly to form a foot 19 which extends beneath the slat 13 to further strengthen and brace it. Seated to have longitudinal movement in the keepers 18 is a shifting bar 20 which is provided at its lower end with lugs 21 adapted to engage ears 22 fixed to and projecting from the floor and provided with inclined faces. The bar 20 carries at one end a pintle 23 which engages the slot 24 of the shorter arm 25 of a lever 26 which is fulcrumed on a pin 28 fixed to the slat 13, the free end of the lever 27 extending upwardly and adapted to be locked in place by a dog 29 secured to the slat 12.

Assuming the parts to be in the relative positions shown at Fig. 1 and it being desirable to open the gate for cleaning, loading or unloading the car, the operator by throwing the lever to the position shown by dotted lines at same figure will thereby draw the shifting bar 20 to the right and free the lugs 21 from their engagement with the ears 22. The gate may then be manually swung upward on its hinges to the position shown at Fig. 4, where a hinged link 30 is dropped over the median lug 21 to sustain the gate in elevated position. In this position a large open space is formed between each side door and each end of the car (extending up-

wardly to the lower fixed slat 12) through which the litter or material in the car may be pushed or thrown, or through which it may be passed for the purpose of loading. It will be apparent that the device may be applied to other classes of cars than those herein described.

The modification shown at Figs. 7 to 9 inclusive is, as regards the wooden parts, the same as in the principal figure, but the gate in the latter is adapted to be swung on its hinges, while in the former instance it is adapted to be raised vertically; I shall now proceed to describe the modified form.

To one of the slats 6 are fixed bent guide rods 31 which extend downwardly. These are not absolutely essential, and may be dispensed with if preferred. The gate is normally held at its lower portion by the ears 22 and at its upper portion by hooks 32 hinged to the slats 12 and their points adapted for engagement with staples 33 driven into the posts. It is readily raised to the position for cleaning etc. by the operator disengaging the hooks and staples, turning the upper edge outwardly to the dot line position at Fig. 8, elevating it by sliding it along the guides to the full line position at Fig. 9 and there securing it by engaging the hooks 34 of the straps 35 with rings loosely secured to a slat 6.

While in the construction shown at Fig. 1 it would not be practical to load the car very close to its sides, (as the load would interfere with swinging the gate) in the one shown at Fig. 7 such loading is not only practical but desirable.

In the modification shown at Fig. 10 a latch 38 is pivoted at 37 to the rod 20 (which here is not fitted with the lugs,) and is again pivoted at 39 to the slat 13. Its operation will be evident from an inspection of the dot line position at same figure.

While I have illustrated and described the preferred embodiment of the invention, it will be evident that without departing from the essential spirit and scope thereof, or sacrificing any advantages, it is susceptible of change as regards form, construction, detail, organization, and the mutual coöperation and combinations of the parts.

To a certain extent the advantages of the invention have been set forth in connection with the general statement of the nature and objects thereof and the detail description of the mechanism, but concisely stated, the leading benefits to be secured thereby are as follows:—First: The cars can be much more readily and quickly cleaned than heretofore, whereby operating expenses will be curtailed; Second: The device may be easily and with but a minimum of expense attached to cars of ordinary construction, the only waste being of two rows of slats; Third: Pig-iron, brick, metals and other heavy sub-

stances and articles may be loaded from a point close to or at which they are to be piled, thus saving the cost of a second handling; Fourth: The cars can be cleaned while in transit; Fifth: Cost of land for a dumping ground is thereby saved; Sixth: In cleaning out it is necessary to throw the litter only a few feet, all carrying being avoided; Seventh: It abates a nuisance, and is sanitary not only for humans but for stock as well; Eighth: The car-ends may be equipped with the improvements for construction and repair work where it is desirable to dump filling material directly on the road-bed; Ninth: The gates cannot be pushed outwardly by cattle, as they are prevented from such movement by the posts and braces; Tenth: Stock cannot be injured by contacting the device; Eleventh: A plurality of the gates may be constructed at each section of the car; and Twelfth: The improvements may be applied to double-deck cars.

In order that there may be neither confusion nor indefiniteness regarding the terms applied to the claim elements, I shall regard and term the entire side of the car as such; that portion thereof between a side door and one of the car ends will be referred to as a "side portion," it including the posts, the in-

clined braces, the slats 6 and the gate; while the slats 6 and the last named element will be termed "sections" or "side sections."

I claim as new and as my invention:

1. In combination with the floor and a fixed section of the side of a car, a gate hinged to said fixed section, keepers on said gate, a shifting bar mounted therein, there being lugs integral therewith, said lugs projecting from its lower edge, a lever fulcrumed on the gate and pivoted to the bar, and a link hinged to the fixed section and adapted for engagement with one of said lugs.

2. The combination with a fixed section of the side of a car, of a gate hinged to said section, a shifting bar supported by said gate, there being lugs integral therewith, and means supported by said fixed section and adapted for engagement with one of said lugs, whereby said gate is sustained in elevated position.

In testimony that I claim the foregoing as my invention, I, the said JOHN W. SLAVEN, have hereto set my hand this fifth day of December, 1907.

JOHN W. SLAVEN.

Witnesses:

JOHN WILSON,
FRANK M. CONNOLLY.