WILLIAM M. LYON.

Improvement in Railway Stock Cars.

No. 115,074. Patented May 23, 1871.

Fig. 1.

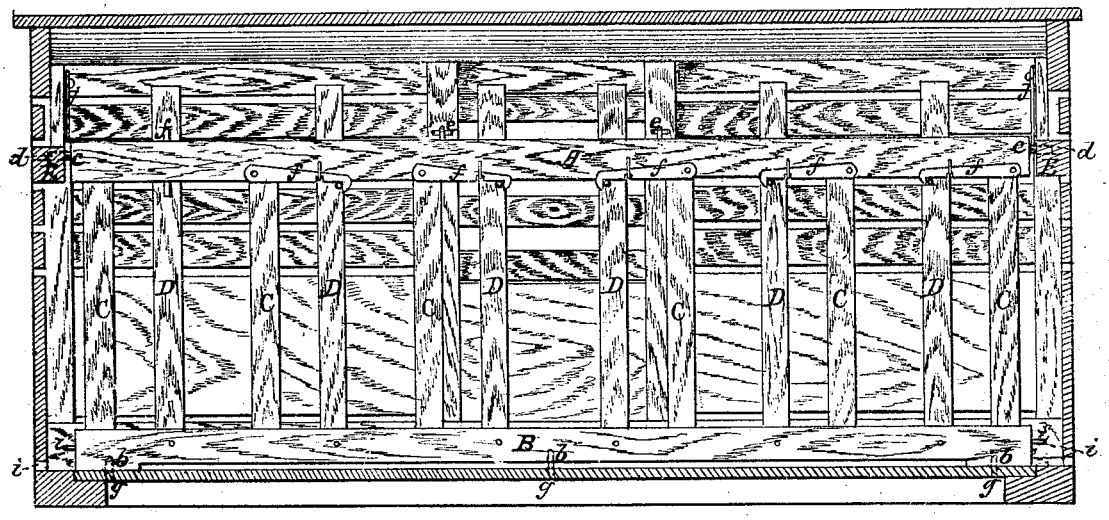


Fig. 2.

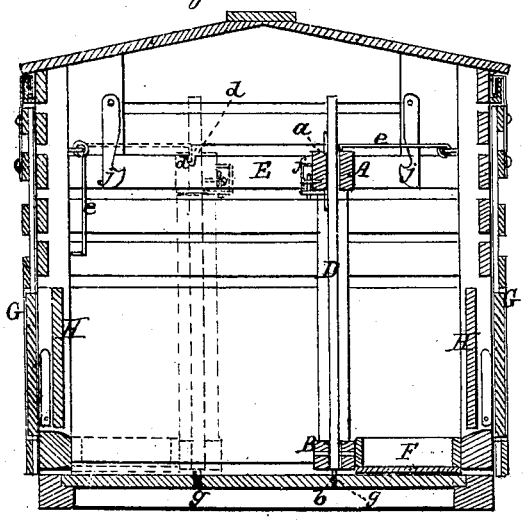
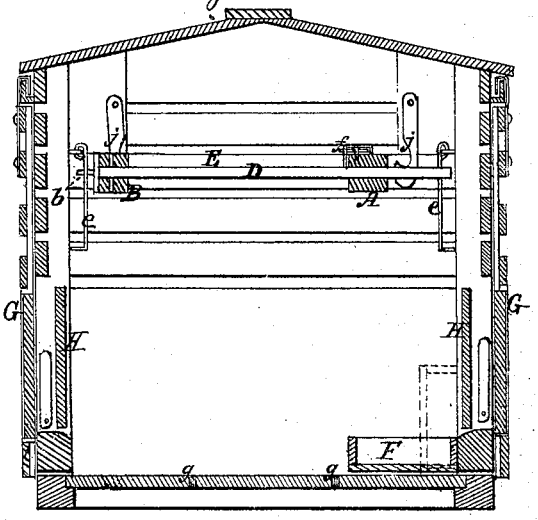


Fig. 3.



Witnesses:
A. G. A. Johnson
Alex. H. le. Klaricke

Inventor:
William M. Lyon
by his Attorney
Edwin L. Stanton

UNITED STATES PATENT OFFICE.

WILLIAM M. LYON, OF SALEM, OHIO.

IMPROVEMENT IN RAILWAY STOCK-CARS.

Specification forming part of Letters Patent No. 115,074, dated May 23, 1871.

I, WILLIAM M. LYON, of Salem, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Cattle and Stock Railway Cars, of which the following is a specification:

My invention relates to railway cars for transporting cattle and horses so as to keep them separated from each other, afford facility for feeding them, and for clearing the car for use in carrying dead freight; and the said invention consists in securing a single rack in position by vertical and horizontal pins, so that, while it affords means for yoking the animals, it may be swung up in the arc of a circle upon the bearings of its top rail, and suspended by hooks in a horizontal position near the top of the car, so as to clear the latter for the storage of dead freight. My invention also consists in the arrangement of grooves for the bearings of the top rail of the rack, hooks for holding and bracing said rack in position, and hooks for suspending the rack, so as to adapt the latter to be used and adjusted at either side of the car, in order to increase the facilities for shipping stock from either side of the track, as occasion may require.

In the accompanying drawing, Figure 1 represents a vertical longitudinal section of the body of a railway car fitted for carrying stock, and embracing my invention; Fig. 2 represents a vertical cross-section of the same; and Fig. 3 represents a similar view, showing the yoking-rack turned up out of the way, and suspended near the roof of the car to adapt the latter for carrying dead freight.

The device for separating and confining cattle or horses consists of a vertical frame secured near the side of the car, and composed of an upper and a lower horizontal rail, A and B, united by vertical bars C at either end, and having arranged at suitable distances apart intermediate fixed bars C′, between which are arranged rack or yoke-bars D, pivoted to the lower rail B, and passing through slots *a* in the top rail A, so as to allow them to be opened or turned upon their pivots to admit the head and neck of the animal between the said fixed and pivoted bars C and D, which are arranged in pairs between the rails A B for this purpose. The stock-rack thus constructed is secured a suitable distance from and parallel to the inside of the car by means of pins *b* projecting from the lower rail into holes in the bottom of the car, and horizontal pins *c* projecting from each end of the upper rail into grooves *d* in horizontal transverse timbers E at each end of the car-frame; and in this position it is locked and braced by hooks *e* hinged to the side of the car and hooked into holes in the top rail A, thus rendering the rack perfectly secure in its position, and at the same time affording great facility for its removal when desired. The hooks *e* serve to hold the rack from being pulled or pushed out of position by the swaying of the animals. The feed and water trough F is placed between the rack and the side of the car.

The animals are taken in at the side of the car and each driven so as to secure its head between a pair of fixed and movable bars, the latter being adjusted to its widest capacity for this purpose, and then pushed up in position to hold the neck and head like a yoke, and is thus secured by a hook, pin, or spring catch, *f*, pivoted or fastened to the rail A in any suitable manner. In this way each animal is secured to the rack separately and independently of the other, with its head at the trough, and compelled to stand or lie on its own portion of the car without interfering with the next animal, whether standing or lying. Moreover, by this arrangement the animals, when standing, brace each other, hip to hip, against the jerking or swaying motion of the cars, and thus prevent their being injured, as is frequently the case when separated by intermediate fixed posts.

The single rack also possesses the additional advantage of having a clear car, which facilitates the introduction and removal of the animals therefrom. It is also of great importance and convenience to adapt the rack to either side of the car in order to ship stock from either side of the track, as occasion may require; to accomplish which it is only necessary to provide the bottom of the car and the upper horizontal rails A near each side of the car with holes *g* and grooves *d* to receive the pins *b c* of the vertical rack, and with hooks *e* to hold and brace it in position, as shown in Fig. 2 of the drawing.

In constructing cars for the transportation of stock it is also of great importance to adapt the same cars for the transportation of dead

freight. This my invention effectually accomplishes in the following manner: The rack is simply unhooked from the side of the car, lifted from its pin-fastenings *b* in the floor, and while the upper bearings *c* remain in their grooves *d*, the lower rail B is turned up in the arc of a circle until the rack assumes a horizontal position, in which it is supported and fixed by means of pins *i* on each end of the lower rail B, fitting into hooks *j* pivoted to the inside of the car, as shown in Fig. 3 of the drawing. In this manner the rack is swung up out of the way and suspended near the top of the car, and held by its weight within the grooves *d* of its upper rail-pins *c*, and upon the hooks *j*, so that it is braced and locked in its suspended position, and cannot be jostled down by jerking of the cars.

To bring the rack into position again to secure stock, the foot-rail B need only be released from the suspending hooks *j*, and it at once assumes a vertical position, and can be fastened in a moment and ready for use.

The ends of the car, near both sides, are provided with these suspending-hooks *j*, so that the rack can be turned up and suspended from either side of the car.

By this simple and convenient construction of rack, and its capacity for removal and adjustment, I am enabled to apply it to any freight-cars now in use, which is a great advantage in point of economy. Moreover, by thus securing the animals so that each braces and supports the other, they can be shipped and transported in better condition than when separated by frames, posts, and fixed stalls.

In changing the rack from one side of the car to the other the feed-trough F must be also shifted as shown in the drawing.

I have described the pin-fastenings *c* as being held in their grooves while turning up the rack to suspend it out of the way; but it is obvious that, instead of being fixed, they may be pushed toward the side of the car in grooves or ways, to allow the rack to be swung up; but this arrangement would be advantageous only in a narrow car.

The yoke-bars D of the rack may be adjusted by pins or hooks, so as to accommodate animals having different-sized necks.

The car is provided with the usual side-doors G and hinged boards H for introducing feed and water to the troughs.

Having described my invention, I claim—

1. The yoking-rack, secured in position by vertical and horizontal pins *b* and *c*, and capable of being swung up upon said pins *c*, and suspended in a horizontal position, in the manner and for the purpose described.

2. The pivoted top rail A of the rack, in combination with the pivoted hooks *j* and pins *i* of the foot-rail, for suspending the latter, in the manner and for the purpose described.

3. The arrangement, in a stock-car, of the pivoted suspending hooks *j*, the holding and bracing hooks *e*, and the confining bearing-grooves *d* of the top rail, disposed in relation to each other so as to adapt the yoking-rack to be used at either side of the car, and to be swung up and suspended out of the way when so arranged at either side, as described.

WILLIAM M. LYON.

Witnesses:
THOMAS KENNETT,
PETER AMBLER.