

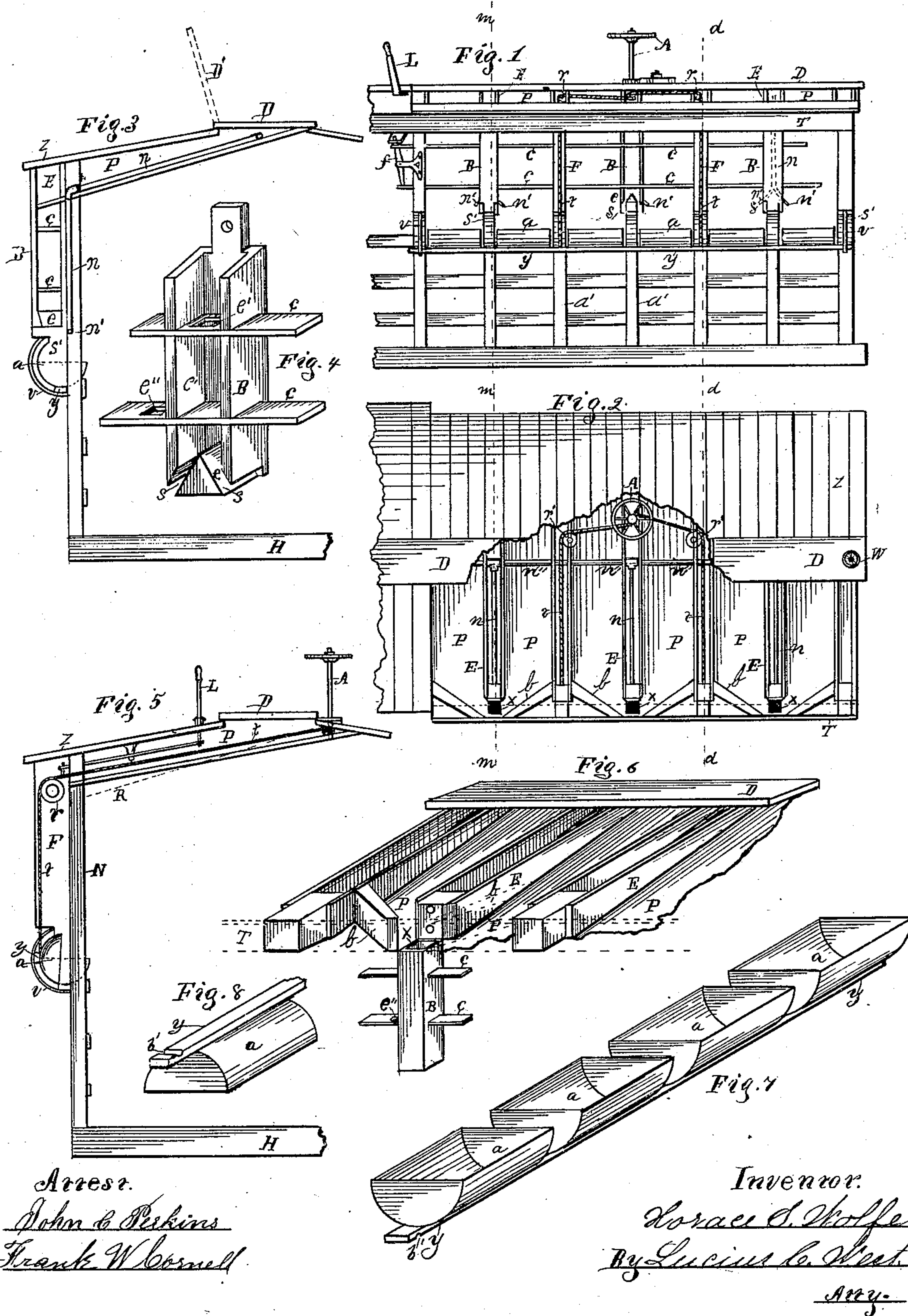
(No Model.)

H. S. WOLFE.

STOCK CAR.

No. 253,804.

Patented Feb. 14, 1882.





# UNITED STATES PATENT OFFICE.

HORACE S. WOLFE, OF KALAMAZOO, MICH., ASSIGNOR OF TWO-THIRDS TO  
FRANK W. CORNELL AND CHESTER KELLOGG, BOTH OF SAME PLACE.

## STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 253,804, dated February 14, 1882.

Application filed September 27, 1881. (No model.)

*To all whom it may concern:*

Be it known that I, HORACE S. WOLFE, a citizen of the United States, residing at Kalamazoo, county of Kalamazoo, State of Michigan, have invented a new and useful Stock-Car, of which the following is a specification.

My invention relates to the construction of cars for the transportation of stock, and to the remodeling of cars already constructed.

It has for its object certain improvements whereby the utility of such cars is increased and the operation of their troughs and feed-receptacles is greatly facilitated.

A construction embodying my improvements consists in a car having the space between the rafters of the roof utilized as feed-receptacles, said rafters being arranged to form inclosures in which the branch water-pipes are located, and also the ropes or chain with which the water-troughs are operated or raised up; and also provided with troughs which are adjustable from the position they occupy when turned up to empty them, and when not in use to the proper position for being filled with grain or water, all substantially as set forth in the following detailed description.

In the drawings forming a part of this specification, Figure 1 is a side elevation of one-half of my improved car; Fig. 2, top view, having a portion of the roof broken away, showing rafters and feed receptacles or bins; Fig. 3, cross-section on line *m m*, Figs. 1 and 2; Fig. 4, perspective of feed-spout, showing plan of measuring the grain; Fig. 5, cross-section on dotted line *d d*, Figs. 1 and 2; Fig. 6, top perspective of roof, enlarged; Fig. 7, perspective of the water and feed troughs; and Fig. 8, single trough, in perspective, bottom upward.

*E E* are the rafters, made from two parallel timbers near each other, forming between them the inclosure in which pipes *n n* and rope or chain *t t* are located. These pipes are branched from the main pipe *n'' n''*, the latter being the common arrangement, with funnel at *w*. The vertical portion of the branch pipes *n* are located between the upright standards of the car and the grain-spout *B*, Fig. 3, and branch, as shown by dotted lines at the right of Fig. 1, terminating with spout-nozzles *n' n'* in a manner to supply two troughs *a a*.

I am aware that water-conveyance pipes in stock-cars are common; but in locating them in the inclosures, as above set forth, they are secluded, out of the way, and are protected from cold drafts of air in freezing weather, and also, if desired, certain material may be packed about them in their inclosure as a further preventative from freezing. The chains being located in these inclosures are prevented from conflicting with the grain, and are of greater utility than if located under the grain-chamber. The chains or ropes *t t* are connected with a windlass or ratchet device, *A*, and are located over and around pulleys *r* and *r r'*, Figs. 1, 2, and 5. These chains pass down a groove in the front side of extensions *F* of standards *a' a'*, and are connected with bar *y* of the troughs *a a*.

The feed or grain receptacles *P P* are made by ceiling the roof of the car on the under side of the rafters *E E*, the latter also serving as partitions in separating different kinds of grain, if desired. As this floor or ceiling is on an incline, the grain readily flows down to the mouth *x* of spout *B*, it being brought to a focus at this point by timbers *b b*, Figs. 2 and 6, which also serve the purpose of braces. Grain-chambers thus formed and located occupy no space of practical utility for storing freight other than stock, for which purpose such cars are frequently used on their return trip. The floor of the receptacles or bins *P* may be on a parallel incline with roof-covering *z*, or by forming the rafters *E* wider at their lower end, as in Figs. 3 and 6, and as illustrated by dotted line *R* in Fig. 5, it may be given a steeper pitch without altering the usual pitch of the car-roof *z*.

I form the top foot-board, *D*, in sections and hinge them at one side, thus making a door which may be opened, as at *D'*, Fig. 3, when filling bins *P* with grain. By this arrangement the foot-board serves a double purpose.

My construction of grain-spouts *B B* is clearly shown in Fig. 4, the front inclosure being here removed. It has a triangular base, *e*, which serves to divide the grain, throwing it both ways out of the delivery-orifices *s s*.

*c c* are gates or shut-offs located movably and transversely in spouts *B B*, and adapted



to move alternately in opposite directions through all the spouts in unison by means of pivoted shaft *f* and lever arrangement *L*, or other suitable means effecting this result.

5 These gates *cc* have openings *e' e''*, as in Figs. 4 and 6, to allow the grain to run down. To illustrate, in these figures the upper gate is adjusted to allow the recess or measure *c'* to fill with grain. By moving lever *L* to the left,  
10 as in Fig. 1, orifice *e''* will be presented in the spout, and orifice *e'* outside of it, in which case the supply of grain from above would be shut off, and the measure *c'* emptied of its contents into troughs *a a*.

15 The preceding clause describes an arrangement of measuring-spouts which I prefer to use in my car, my improvement therein consisting of the pyramidal base *e*, which causes the single grain-spout to perform the office of  
20 two, and in a more practical manner.

My improvement in the sectional water-trough arrangement consists in securing them to a bar, *y*, having grooves *b' b'* in each end, and connecting said bar with other features of  
25 the car, as follows:

To the standards *a' a'* are secured elliptical blocks or projections *s' s'*, around which are located elliptical rods *v v*, leaving a little space between said blocks and rods. In this space  
30 the ends of bar *y* are movably located, groove *b'* fitting around rod *v* and serving to keep the bar and its sectional water-troughs accurately in their true position in relation to the studs of the car-wall; also, by this arrangement, the

troughs accurately, quickly, and automatically  
35 fall from an unused position to their proper location to receive water.

In the operation of the troughs *a a*, I turn them up in position shown in Fig. 5, when desiring to empty them, by means of the capstan  
40 or ratchet device *A* and the chains connected with bar *y*. In adjusting them in proper location for use, as in Figs. 1 and 3, I slack the chains or ropes, when said troughs automatically throw themselves to place by their own  
45 weight.

I claim—

1. In a stock-car provided with sectional water and feed troughs, the troughs secured to a bar having the end grooves, in combination with a car having the semicircular projections and rods, between which the ends of the trough-bar are movably located, all substantially as set forth. 50

2. In a stock-car, the grain-chambers occupying the limited space set forth, provided with the obliquely-angled beams, serving to brace the structure and guide the grain to the mouth of the feed-spouts, substantially as specified and shown. 55 60

3. In a stock-car, the double rafters in the roof, constituting inclosures for the water-pipes, substantially as described.

HORACE S. WOLFE.

Witnesses:

EUGENE S. WEST,

FRANK W. CORNELL.