

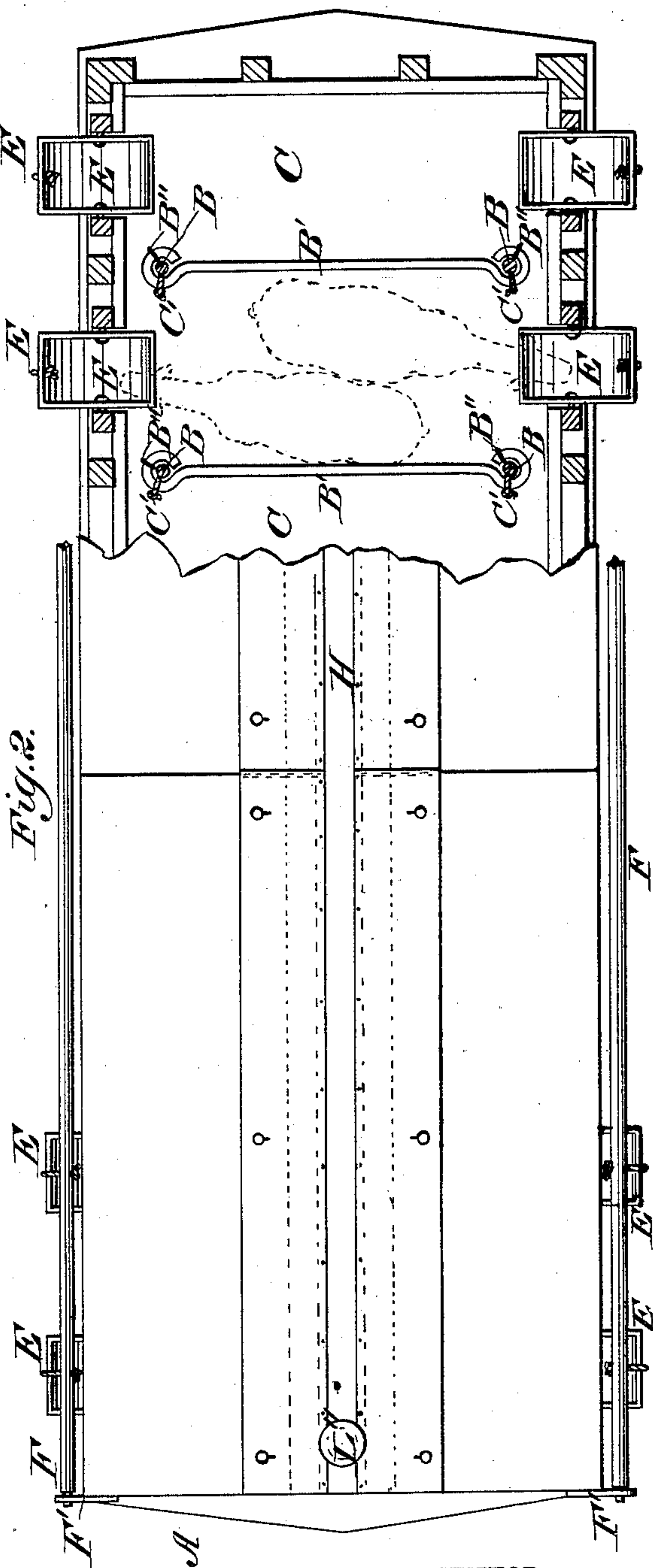
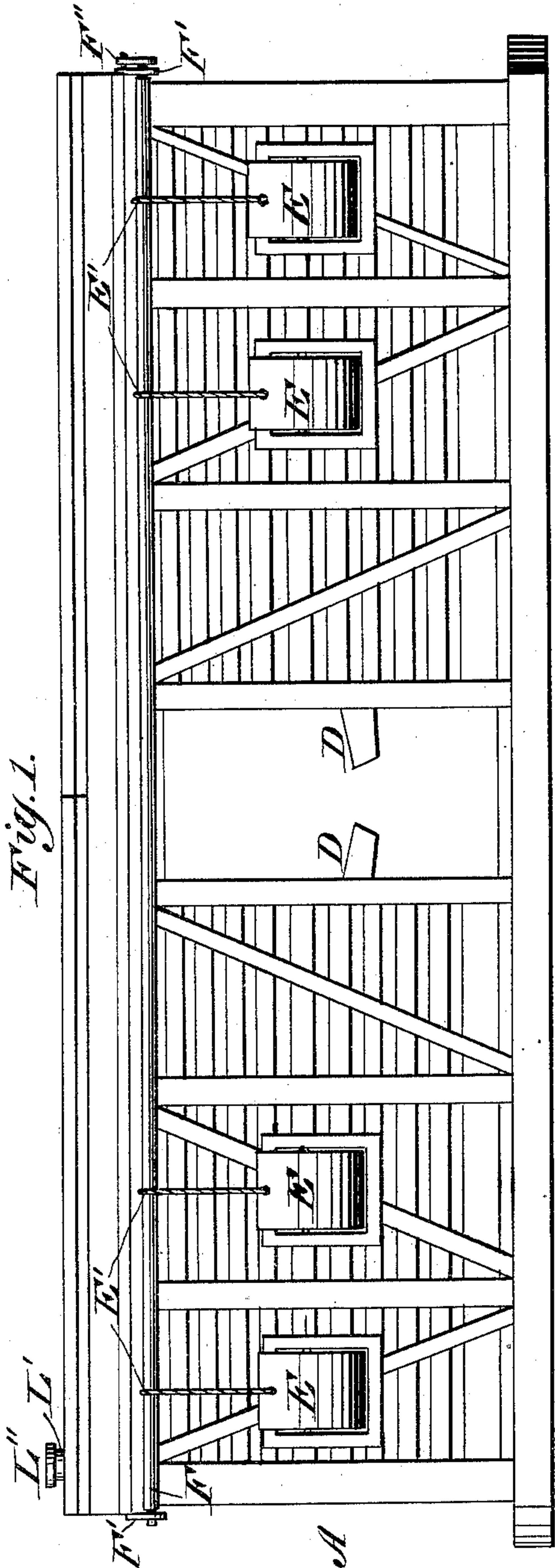
(No Model.)

2 Sheets—Sheet 1.

S. S. HAIGHT.  
Stock Car.

No. 232,262.

Patented Sept. 14, 1880.



WITNESSES:

*Donn P. Twitchell.*  
*C. Sedgwick.*

INVENTOR:

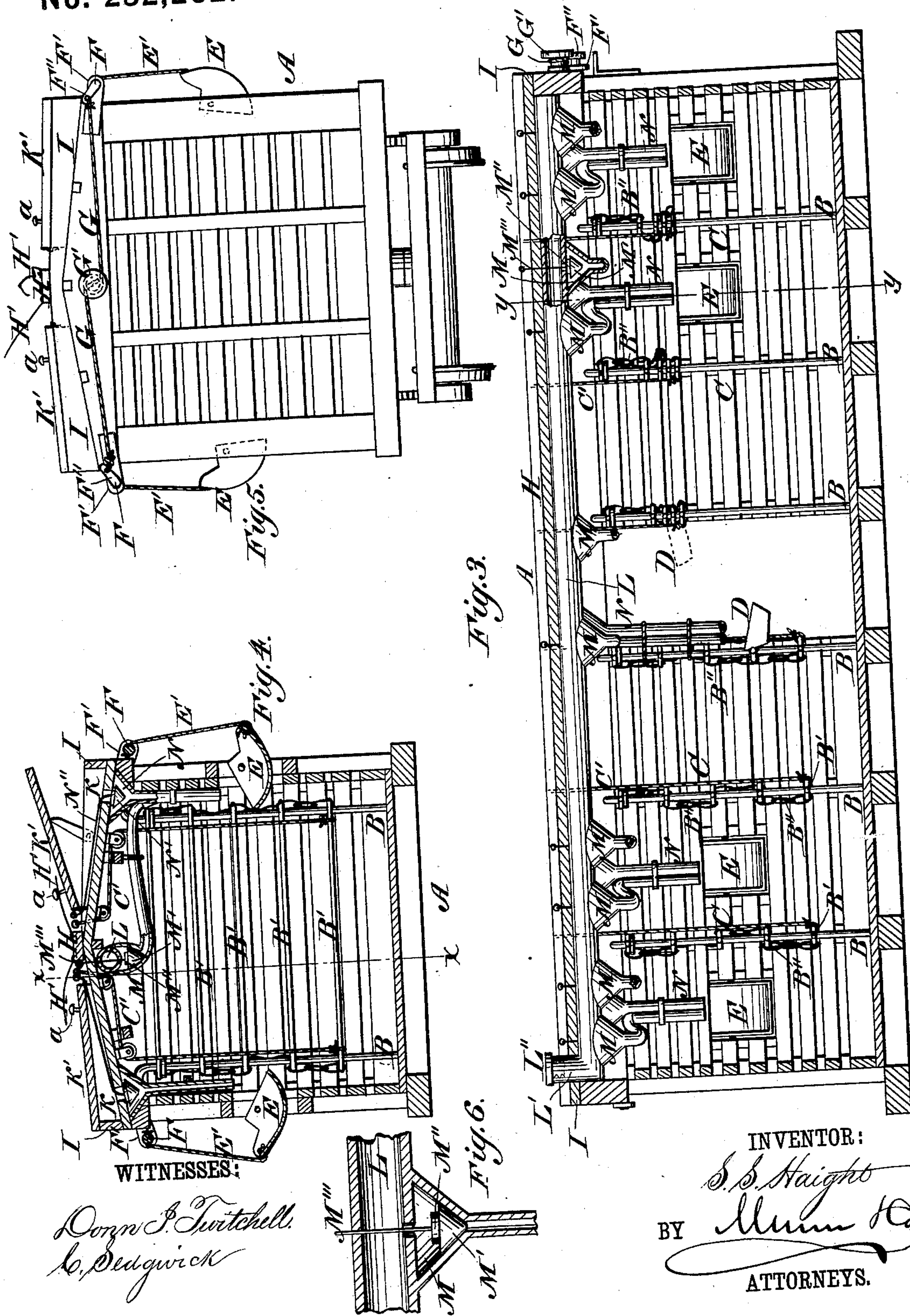
*S. S. Haight*  
BY *M. H. H.*  
ATTORNEYS.

(No Model.)

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# UNITED STATES PATENT OFFICE.

STEPHEN S. HAIGHT, OF NEW YORK, N. Y.

## STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 232,262, dated September 14, 1880.

Application filed June 11, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, STEPHEN S. HAIGHT, of the city, county, and State of New York, have invented a new and Improved Live-Stock Car, of which the following is a specification.

This invention relates to improvements in cars for transporting cattle on railroads, the object being to provide separate and quickly-arranged stalls for the cattle to carry sufficient stores of food and water for their consumption during a long trip, and to provide most convenient devices for feeding and watering the cattle, and in other ways administering to their comfort and necessities.

The invention consists of vertically-adjustable gates or partitions of peculiar construction, of food and water receptacles or reservoirs upon and beneath the car-roof, of feeding-troughs of novel design, of improved devices for supplying food and water to the feeding-troughs, and of other novel devices in combination with the above, all of which are hereinafter described.

Figure 1 is a side elevation of a cattle-car, showing my invention. Fig. 2 is a plan of the same with parts broken away to exhibit other parts. Fig. 3 is a longitudinal sectional side elevation of the same on line *x x*, Fig. 4. Fig. 4 is a transverse end sectional elevation on line *y y*, Fig. 3. Fig. 5 is an end elevation of the car. Fig. 6 is detail, in section, of one of the funnels.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents a cattle-car such as are in common use, the sides being built of slats to afford sufficient light and ventilation. B B represent the stall-posts, that are preferably stout metal rods fixed in opposite rows along the sides of the car, inside thereof, and have their lower ends inserted in the floor of the car and their upper ends bent and entered into the plates that support the roof of the car, as shown, or entered straight into the car-roof. On each pair of these posts B B slide a number of transverse rods, B', whose end eyes or loops embrace said posts, and at each post B the ends of said rods B' are connected with each other by a chain, B'', to hold said rods B' properly in position when they are lowered in place, the upper end of

said chain B'' being fastened to the car-roof. These parts constitute the vertically-adjustable partitions C, that divide the car A into stalls for the cattle, and are arranged transversely. Said partitions are readily elevated or adjusted from the top of the car by means of the cords or chains C', that are secured to each end of the lowest rod B', and led up over and under the sheaves *c d*, respectively, through the top of the car, within easy reach of the operator on the run-board.

This peculiar construction of stall-partitions is to the advantage of good ventilation and cleanliness in the car, and affords a speedy and effective means of arranging a car for the reception of cattle, and it is of special advantage that these partitions C can be raised and held to the roof of the car when the car is used for other freight.

Secured to a rod or rods of these sliding or folding stall-partitions C are the feed-troughs D, which are attached to rings sliding upon the rod B', or attached to the chains B'', and are raised or lowered with the said partitions C.

In transporting cattle the central space of car is converted into a stall by closing the doors. As the feeding-troughs E could not well be used in a sliding door the troughs D are especially designed for this central stall.

In suitable openings in the sides of the car the feed-troughs E are pivoted to swing in a vertical plane and in such a manner that by their own gravity they will fall into a horizontal position, projecting partly outside and partly inside of said openings, for the reception of food and water and offering them to the cattle, or can be tilted with their outer ends up and their inner ends down and bottoms outward to discharge themselves of their contents, or that they may close the said openings against wind and rain and at the same time afford more room in the stalls. These troughs E are adjusted by means of cords or wires E', which connect their outer ends with the rods F, that are extended along either side of the car, under the eaves of the roof, and are journaled at each end in the hangers F', that are secured to the ends of the car.

On one end of each rod F is a crank, F'', and cords or wires G, fastened to these cranks F'', are led to a revolving stud or button, G',



fixed in the end of the car just below the run-board H, and secured thereon, so that the operator on the said run-board H can, by turning said stud or button G', move the rods F to elevate or depress the troughs E at will.

Around the sloping roof of the car is built a ledge, I, that serves to form a receptacle, K, for the food for the cattle, and centrally and longitudinally along the roof of the car is the fixed run-board H. On either side of this run-board H, and a few inches distant therefrom, are hinged the covers K' of the receptacles K, said covers K' being designed to protect the contents of said receptacles K from the weather; and, in order to protect the hinges of the covers K' and the operating wires, cords, or chains of the device from storms, strips H', of canvas or rubber, are secured along the edges of the run-board H, and are buttoned over the studs a of the covers K'.

L is the water pipe or reservoir, preferably of from six to eight inches in diameter, suspended centrally and longitudinally beneath the roof of the car, and having attached to one end thereof an upright feed-pipe, L', that may be closed with a screw-cap, L'', whereby said pipe L may be conveniently filled from the road-tanks. At suitable points this water-reservoir L is perforated on its under face, and over and about each perforation is soldered or otherwise firmly secured a water-tight funnel or cone, M, of sufficient capacity to hold a bucket of water or thereabout, there being one cone or funnel M for each feeding-trough in the car. Within each funnel or cone M is a metallic valve, M', having a washer, M'', of rubber or other elastic substance, on its top, which valve M' is attached to a wire, M''', that passes up through the reservoir L and top of the car, so that the operator on the roof can draw said valve M' up against the perforation in the bottom of the reservoir L, so that the washer M'' shall close said opening or perforation, while at the same time the withdrawal of said valve M' permits the water that has filled the cone M to pass down, through an attached hose or pipe, M''', to the feed-trough, and when released by the operator the said valve M' falls by its own weight to the bottom of the cone M and stops the outflow therefrom and permits the refilling thereof.

Cones or funnels N, of similar shape and size to the cones M, are attached to the roof of the car, beneath orifices in the bottom of the feed-receptacles K, over each end of each stall in the car, and said cones N are provided with valves N', of like construction with the valves M', and said valves N' are operated by means of the wires N'' in the same manner as are the said valves M' by the wires M''.

The covers K' may be hinged at the eaves

of the car-roof, or, as shown in the drawings, at will.

The feed-troughs may be of either construction and arrangement shown. If the troughs E are used their arrangement for use or disuse is found to be easy and convenient; while if the troughs D be used on every stall-partition C no trough-openings will be required in the sides of the car, and the adjusting-rods F and cords or wires E' may be dispensed with, also the cords or wires G and the stud or button G'.

The most obvious advantages of this invention are the simplicity and cheapness of the parts, the readiness with which they may be applied to the ordinary cattle-cars now in use, and the readiness with which the car can be converted to other uses; the regularity and certainty with which proper quantities of food and water can be given to the cattle, and the ease with which all the necessary operations for feeding and watering the animals may be performed from the run-board while the car is moving or at rest.

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

1. In a live-stock car, the combination, with the vertically-adjustable stall-partitions C, of the troughs D, substantially as herein shown and described, said troughs being attached by rings to the upright rods of the said partitions or to the chain connecting the transverse rods, as set forth.

2. In a live-stock car, the combination, with the feed-troughs E, pivoted in side openings of the car, of the cords or wires E', rods F, studs or buttons G', and cords or wires G, substantially as herein shown and described, whereby said troughs are adjusted, as set forth.

3. In a live-stock car, the combination, with the feed-receptacle K, of the funnels or cones N, provided with valves N', operated by wires or cords N'', substantially as herein shown and described.

4. The combination, with the car A, of the vertically-adjustable stall-partitions C, provided with troughs D, pivoted swinging troughs E, provided with adjusting mechanism, covered roof, food-receptacle K', perforated water-reservoir L, provided with upright feed-pipe L' and cones or funnels M, and feed-funnels N, provided with elastic-topped valves M' and N', substantially as herein shown and described.

STEPHEN S. HAIGHT.

Witnesses:

I. I. STORER,  
JNO. W. MARTYN.