

(No Model.)

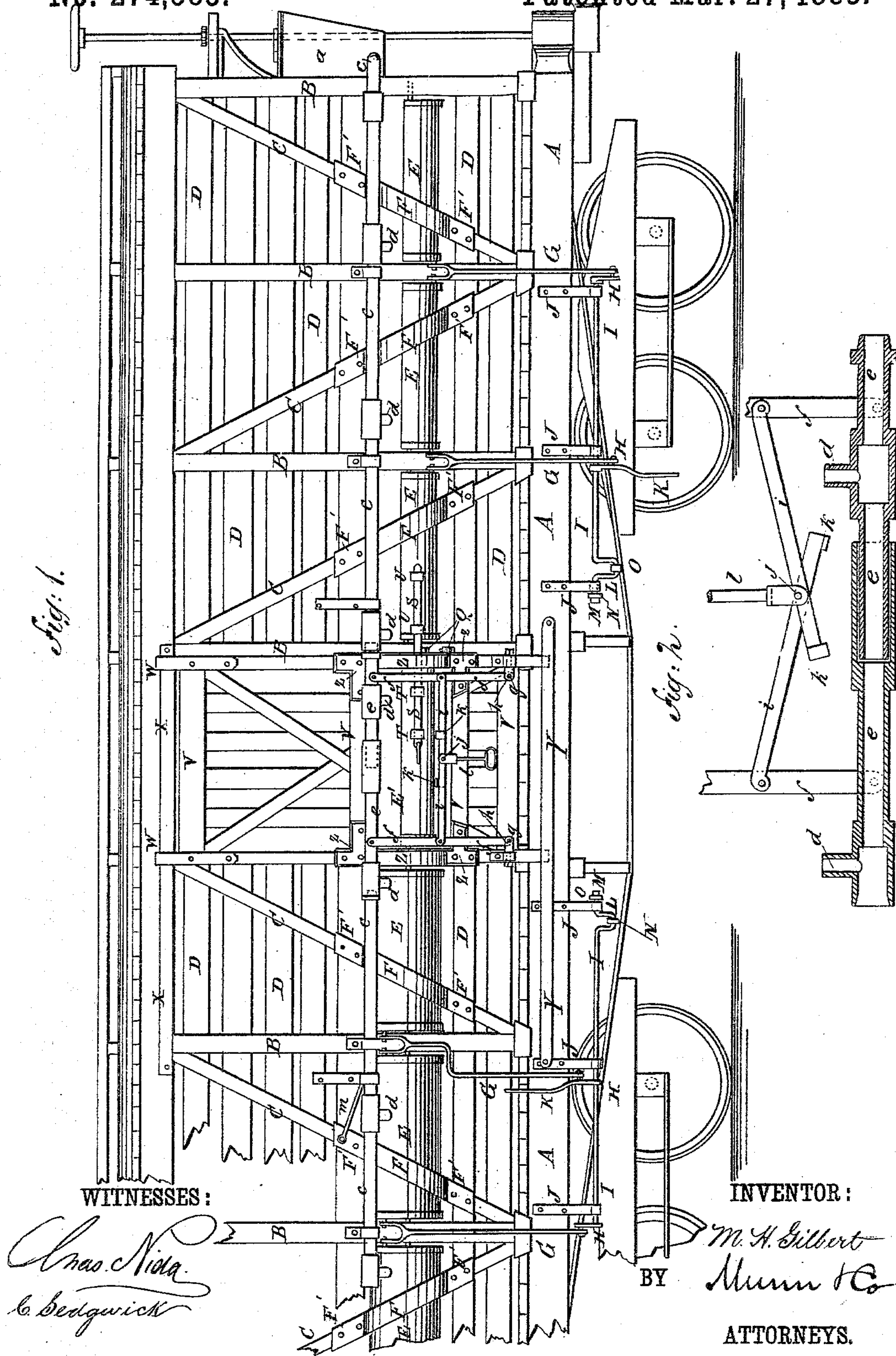
2 Sheets—Sheet 1.

M. H. GILBERT.

STOCK CAR.

No. 274,585.

Patented Mar. 27, 1883.



N. PETERS, Photo-Lithographer, Washington, D. C.

(No Model.)

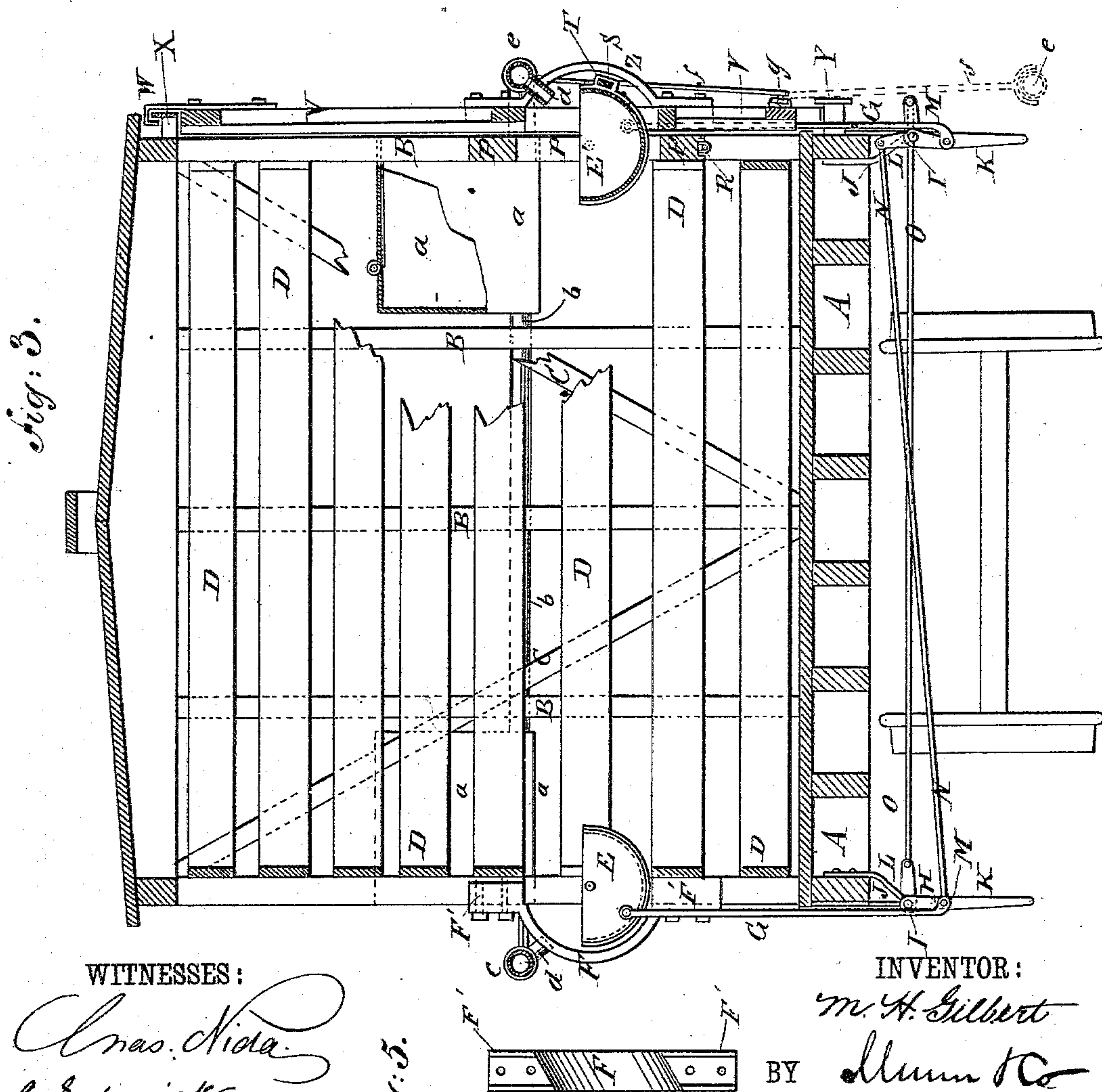
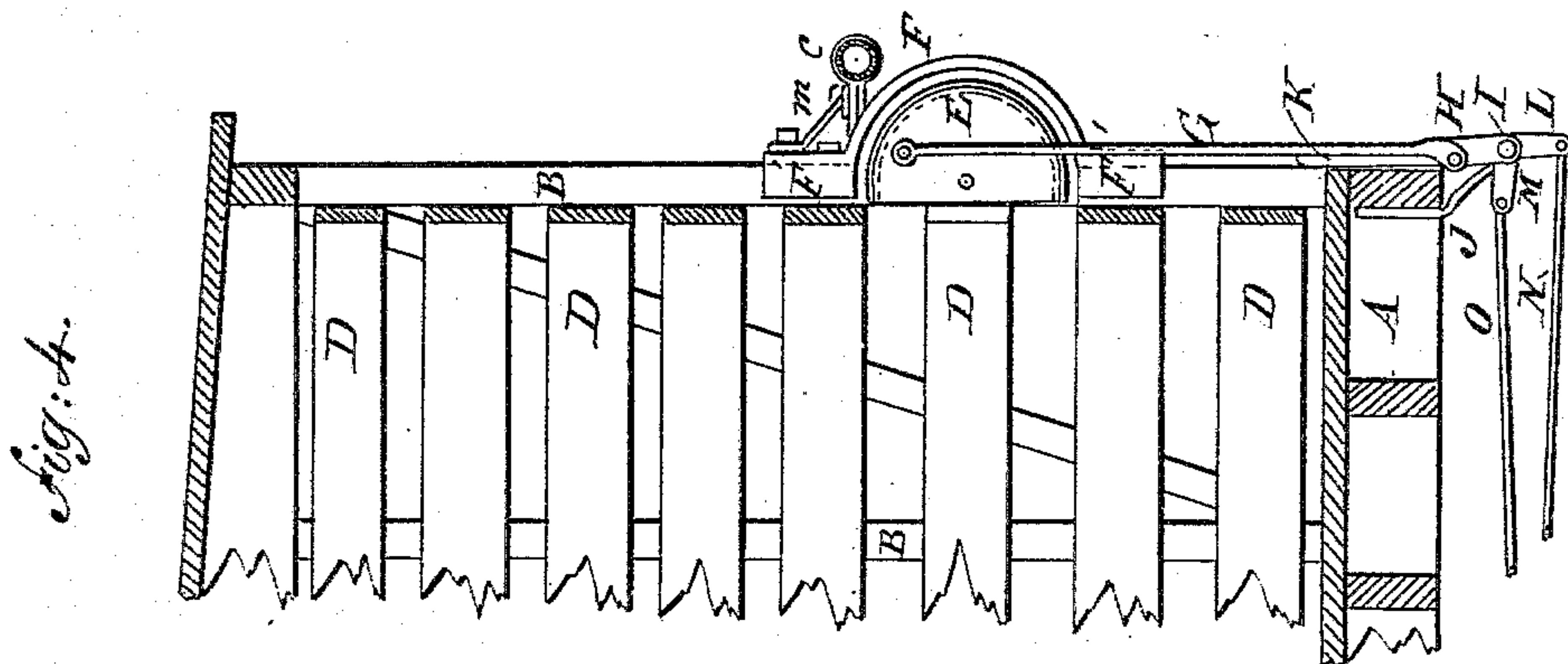
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WITNESSES :

WITNESSES:
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UNITED STATES PATENT OFFICE.

MONTROSE H. GILBERT, OF SMITHVILLE, OHIO.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 274,585, dated March 27, 1883.

Application filed October 17, 1882. (No model.)

To all whom it may concern:

Be it known that I, MONTROSE H. GILBERT, of Smithville, in the county of Wayne and State of Ohio, have invented a new and useful Improvement in Stock-Cars, of which the following is a full, clear, and exact description.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1, Sheet 1, is a side elevation of a part of a car to which my improvement has been applied. Fig. 2, Sheet 1, is a sectional side elevation of the part of the water-pipe that crosses the car-door, shown as inverted and enlarged. Fig. 3, Sheet 2, is a sectional end elevation of the car, part being broken away. Fig. 4, Sheet 2, is a sectional end elevation of a part of the car. Fig. 5, Sheet 2, is a plan view of the inner side of one of the inclined coupling-bars.

The invention consists in a stock-car constructed with troughs pivoted to and between the uprights of the car-body, and having bars pivoted to them and pivoted to the cranks of shafts provided with a lever, so that the troughs can be readily turned into and out of position for use. The crank-shafts upon the opposite sides of the cars have cranks upon their corresponding ends which are connected in pairs by two connecting-rods, whereby the troughs upon both sides of the car can be operated from either side of the said car. The trough placed in the doorway of the car is pivoted to a frame which is detachably hinged to the door-post, so that the said trough can be readily secured in and removed from the said doorway. With the trough pivoted to the detachable hinged frame are connected keepers, in which works a bolt shooting into keepers attached to an adjacent trough, so that the said troughs will move together. The adjacent ends of the parts of the inclined braces that are cut to receive the troughs are connected by bars curved in their middle parts to pass around the troughs, and having sockets upon their ends to receive the ends of the said parts of the braces. To the end of the car-body frame are attached two water-receivers, which are connected by a pipe, and with which are connected the ends of pipes extending along the sides of the car, and which are provided with nozzles to discharge

water into the troughs, so that water can be introduced into all the troughs of the car at the same time. The parts of the water-pipe upon the opposite sides of the doorway are connected by a telescopic coupling-pipe, with which are connected the upper ends of bars hinged at their lower ends to the door and connected by bars pivoted to each other and provided with a handle, whereby the said coupling-pipe can be readily operated and turned down to allow the door to be opened, as will be hereinafter fully described.

A represents the bottom frame, B the uprights, C the inclined braces, and D the horizontal bars, of an ordinary stock-car.

E are troughs to receive the feed and water for the animals. The troughs E are made in the form of half-cylinders, and are pivoted at their ends to and between the adjacent uprights B, along the opposite sides of the car. Space is obtained for the troughs E by cutting away the parts of the inclined braces C, that cross the spaces in which the said troughs are placed, and connecting the ends of the parts of the said braces by coupling-bars F. The bars F are curved in their middle parts to correspond with the size of the troughs E, and have forwardly-projecting flanges formed along the side edges of their straight end parts to form open sockets F', to receive the ends of the parts of the braces C. The end sockets, F', of the coupling-bars F are secured to the ends of the parts of the braces C by bolts or rivets.

To the adjacent ends of the troughs E are pivoted the forked upper ends of the connecting-rods G, the lower ends of which are pivoted to cranks H, formed upon or attached to the shaft I. The shaft I rocks in bearings in brackets J, attached to the side bars of the bottom frame, A, and to it is attached a lever, K, which may be the extension of one of the cranks H, so that by operating the said lever the troughs can be turned into a horizontal position to receive food or water for the animals, and turned into a vertical position to be out of the way when not in use. The pivoting-points of the connecting-rods G are so arranged that when the troughs are in either position the pivoting-points at the lower ends of the connecting-rods G will be inside the line connecting the upper pivoting-points of the said rods and the axis of the crank-shaft I, so

that the said troughs will be locked in place without other fastening. Upon the corresponding ends of the crank-rods I, at the opposite sides of the car, are formed cranks L M to each rod and projecting at right angles with each other, so that the cranks of both pairs cannot both be on the dead-point at the same time. The corresponding cranks of the two pairs are connected by rods N O, and are so arranged that by turning either of the levers K downward the troughs E upon both sides of the car will be turned into a horizontal position, and by turning the said levers K upward the troughs upon both sides of the car will be turned into a vertical position.

The trough E', that crosses the doorway, is pivoted in and to a small frame, P, which is placed within the said doorway, and is connected at one end with the upright bar B, that forms the door-post, by separable hinges Q, and at the other end is connected with the upright bar B, that forms the other door-post, by a bolt, R, so that the said frame can be unbolted, swung outward, and lifted off its hinges when it is desired to leave the doorway free. The trough E', pivoted to the frame P, is connected with an adjacent trough, E, by a bolt, S, sliding in keepers T, attached to the said trough E', and shooting into keepers U, attached to the said adjacent trough E, so that the trough E' will be turned by and with the other trough.

The door V has hangers W, attached to its upper end, which slide on a bar or rail, X, connected with the car-body, and its lower end is kept in place by a guard-bar, Y, connected with the bottom frame, A, of the car. The part of the door V opposite the trough E' is cut away, and the two parts thus formed are connected by bars Z, the middle parts of which are curved, so as not to obstruct the movements of the trough E', and so as to pass over the curved coupling-bar F when the door is pushed back. The end parts of the curved bars Z are bolted to the adjacent ends of the parts of the side bars of the door, and have short arms upon their inner edges to overlap and be bolted to the cross-bars of the said door, so that the door will be firm and strong.

To the side parts of one end of the car are securely attached boxes a, to serve as receivers for the end of a hose from a water-tank or pump, and for the water discharged from the said hose. The two receivers a are connected by a pipe, b, so that the water can be introduced into either receiver a, as may be convenient. With each receiver a is connected the end of a pipe, c, which extends along the side of the car to the doorway, and is continued at the other side of the doorway to or nearly to the other end of the car. The pipe c is placed a little above the level of the troughs E, and is provided with a discharge-nozzle, d, for each trough, E. The pipe c is supported by brackets attached to the upright bars B. The ends of the parts of the pipe c, upon the opposite sides of the doorway, are open to engage with

the ends of the connecting-pipe e, which is made in two parts, telescoping into each other at their inner ends, so that they can be contracted to withdraw their outer ends from the ends of the parts of the pipe c.

To each part of the pipe e, near its outer end, is hinged the forked upper end of a bar, f, to the lower end of which is hinged a horizontal pintle, g. The pintle g works in the eye of an eyebolt, h, attached to the lower part of a side bar of the door V, thus forming a double hinge, so that the bar f can be swung upon its hinge transversely and longitudinally with the car, as may be desired.

To the bars f, at or above their centers, are hinged the outer ends of two bars, i, the inner ends of which overlap each other, and at a little distance from their ends are pivoted to each other by a bolt or rivet, j. Upon the upper edge of the inner end of each bar i is formed a lip, k, which overlaps the upper edge of the other bar, so that the said bars cannot drop below a horizontal position. The bolt or rivet j also passes through the forked upper end of a bar, l, which serves as a handle for operating the bars i. With this construction, by pressing the handle l upward, the inner ends of the bars i will be forced upward, drawing the upper ends of the bars f inward, and withdrawing the outer ends of the telescoping parts of the coupling-pipe e from the ends of the pipe c, so that the coupling-pipe e, the bars f, and the connecting-bars i can be turned down into the position shown in Fig. 2 and in dotted lines in Fig. 3, to allow the door V to be opened. The part of the pipe c at the side of the doorway next the water-receiver a is held from longitudinal movement when the telescopic coupling-pipe e is being pressed into it by the bolts that fasten the said receiver to the frame of the car-body, and the part of the said pipe c, at the other side of the doorway, is held from longitudinal movement by a brace, m, one end of which is attached to the frame of the car-body, and its other end is attached to the said part of the pipe c or to its supporting-bracket.

In using the car when the animals are to be fed the levers K are turned down to turn the troughs E into and lock them in a horizontal position ready to receive the food. When the animals are to be watered the troughs E are turned into a horizontal position, and the discharge-hose of a water-tank or pump is inserted in one of the receivers a, from which the water flows along the pipes c e into the troughs E. The discharge-nozzles d of the pipes c e are always left open, so that the water will always run out of the said pipes, and can never freeze in them. With this construction, when the troughs E are turned into a vertical position, the interior of the car will have the same capacity for carrying freight as though the improvement had not been applied to it.

Another advantage of this improvement is that it can be readily applied to stock-cars already in use.

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

1. In a stock-car, the combination, with the 5 uprights B of the car, of the pivoted troughs E, the connecting-rods G, the crank-shaft H I, and the lever K, substantially as herein shown and described, whereby the said troughs can be readily turned into and out of position 10 for use, as set forth.

2. In a stock-car, the combination, with the crank-rods H I, connected with the pivoted troughs and provided with the cranks L M, 15 of the two connecting-rods N O, substantially as herein shown and described, whereby the troughs upon both sides of the car can be operated from either side of the said car, as set forth.

3. In a stock-car, the combination, with the 20 door-posts B, and the trough E', of the detachable hinged frame P, substantially as herein shown and described, whereby the said troughs can be readily secured in and removed from the doorway, as set forth.

25 4. In a stock-car, the combination, with the trough E', pivoted to the detachable hinged frame P, and the adjacent trough E, pivoted to the car-body uprights B, of the bolt S and keepers T U, substantially as herein shown 30 and described, whereby the said trough can

be readily connected with and operated by the adjacent trough, as set forth.

5. The combination, with the braces C, of middle-curved coupling-bars F, having open sockets F', secured to and receiving the ends 35 of said braces, as shown and described.

6. The combination, with the water-pipe c, of a connecting-pipe, e, made in two telescoping parts, the hinged and forked bar f, the hinged horizontal pintle g, and the eyebolt h 40 on door V, as shown and described.

7. The combination, with the bars f, of the two overlapping bars i, hinged at or above the centers of said bars f, pivoted together 45 near their ends and having the lips k, whereby said bars cannot drop below a horizontal position, as described.

8. In a stock-car, the combination, with the telescopic coupling-pipe e, and the car-door V, 50 of the hinged bars f, the pivoted connecting-bars i, and the handle l, substantially as herein shown and described, whereby the said coupling-pipe can be readily operated and turned down to allow the door to be opened, as set forth.

MONTROSE H. GILBERT.

Witnesses:

JOHN ZIMMERMAN,
E. H. GILBERT.