J. B. CALKINS.

Stock-Cars.

No. 146,378. Patented Jan. 13, 1874.

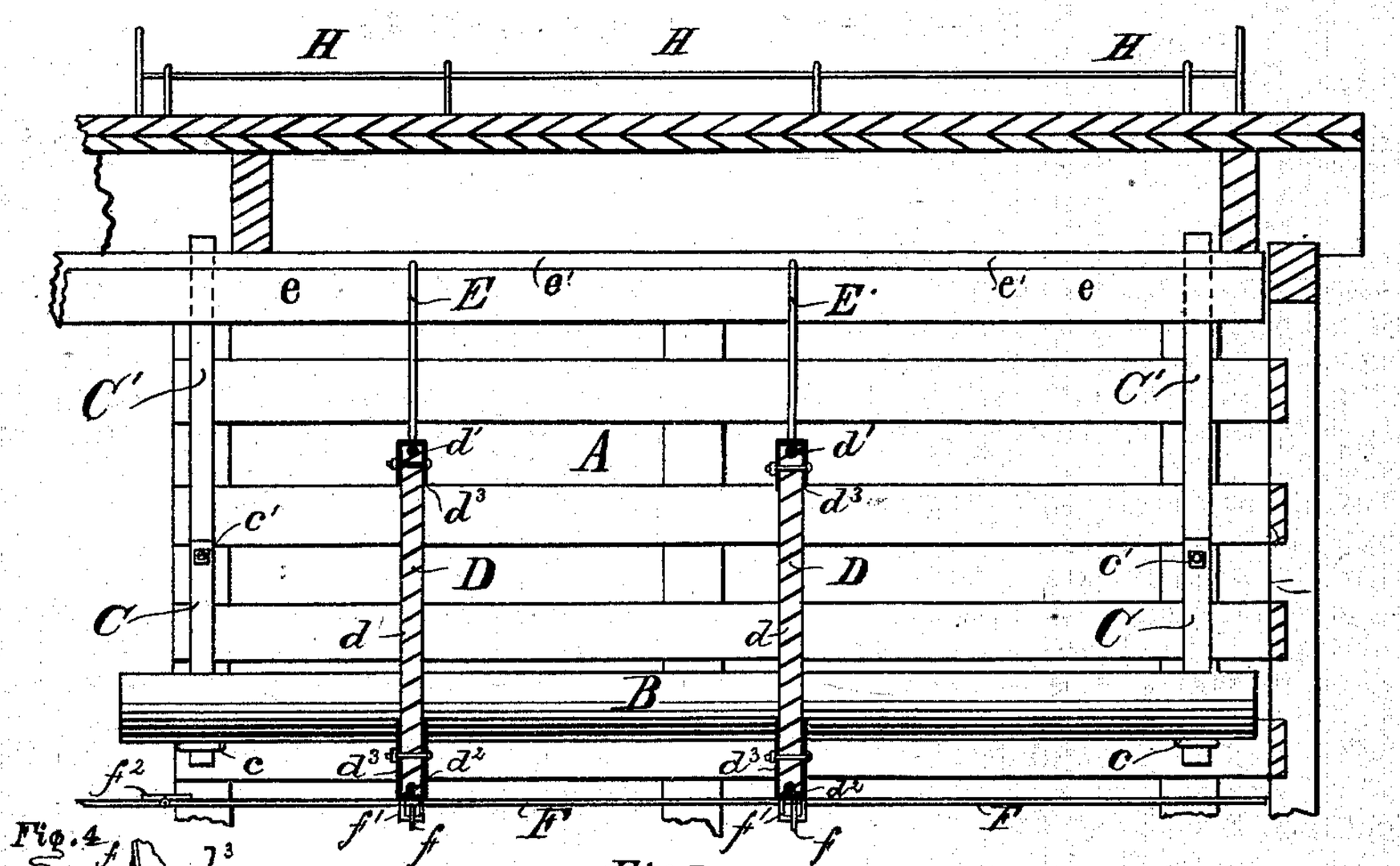

Fig. 1.

Fig. 4.

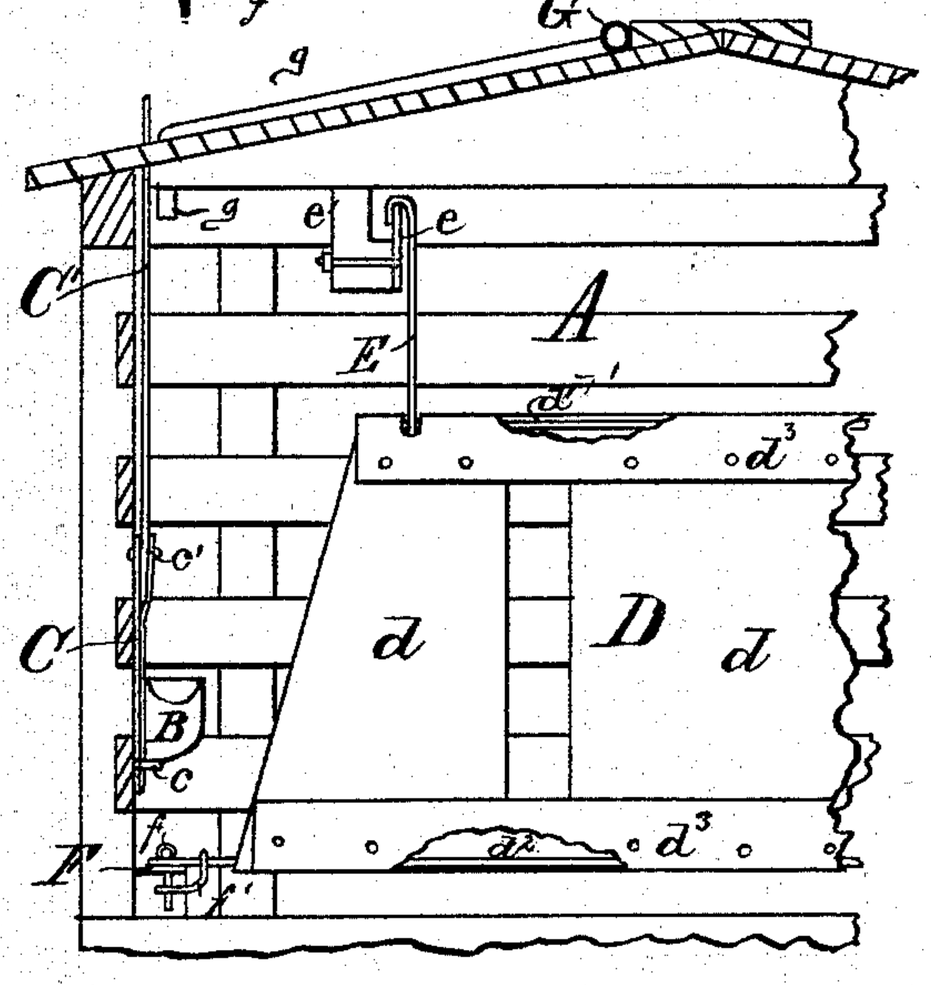

Fig. 2.

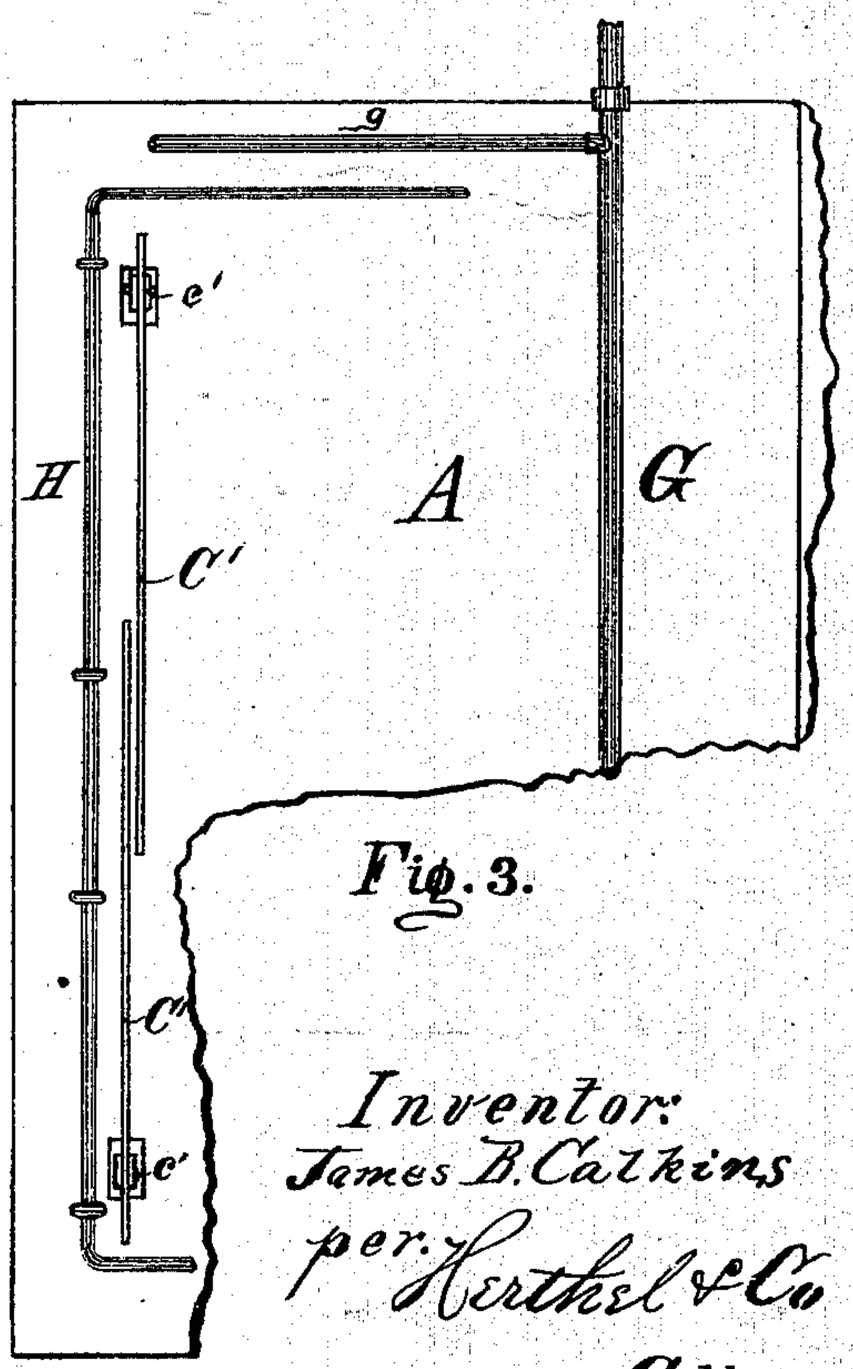

Fig. 3.

Witnesses:
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UNITED STATES PATENT OFFICE

JAMES B. CALKINS, OF PACIFIC, MISSOURI.

IMPROVEMENT IN STOCK-CARS.

Specification forming part of Letters Patent No. **146,378**, dated January 13, 1874; application filed July 3, 1873.

To all whom it may concern:

Be it known that I, JAMES B. CALKINS, of Pacific, in the county of Franklin and State of Missouri, have invented an Improved Stock and Freight Car, of which the following is a specification:

This invention relates, first, to attaching to troughs lift-bars having a hinge-joint, and further made to partly extend out of the roof of the car when trough is lowered in position. When the trough is raised so that the hinge-joint of lift-bars will be above the roof, the bars will fall on the roof, thus holding the trough top of the car within. Secondly, to an improved constructed stall, consisting of partitions, and the manner of securing same top and below, all of which will hereinafter appear.

Of the drawing, Figure 1 is a longitudinal sectional elevation; Fig. 2, a part transverse sectional elevation; Fig. 3, a part top plan, Fig. 4 being a detail perspective of mode of fastening the stalls.

A represents a freight or stock car built as ordinary. B is the trough as ordinarily made. In order to raise and lower the troughs B, my invention consists in the arrangement and operation of lift-bars, as follows: C C′ are the lift-bars. That of C is firmly attached to the back of the trough near ends thereof. It also partly extends below the trough, so as to engage an eyebolt, *c*, which is secured to the sides of the car. (See Figs. 1 and 2.) The upper lift-bars, C′, pass through a mortise in the roof of the car, and partly extend top of same, at least sufficiently to be drawn up, Figs. 1, 2, and 3. Further, the upper lift-bars, C′, are united to lower lift-bars, C, at *c′*, by a proper pivotal or hinge joint. When, therefore, the trough is in lowered position, Figs. 1 and 2, the lift-bars C C′ form a back support for the trough, it at the same time resting upon the eyebolts *c*. To clear the car, or raise the trough to top thereof out of way, the operator merely lifts said trough to top, and in doing so the lift-bars C C′ are also raised until their hinge-joint *c′* is above the roof, which causes the upper bars C′ to fall on same, and assume the positions shown in Fig. 3. Here it will be noticed that the lift-bars C′, falling lengthwise and lying parallel to each other upon the roof, by their weight hold the troughs top of the car within. When the trough is to be lowered, as required, the lift-bars C′ are lifted vertically, which permits the trough to lower, and in doing so they are guided in their descent by the lift-bars themselves, the lower ends of which readily engage the eyebolts *c*, and thus seat the trough. The troughs are thus lowered from without the car, but can be raised from within the car or without, as preferred. D represents my improved sliding partition to form stalls. It consists of upright slats or boards *d*, set apart from each other, and top and bottom rods, d^1 d^2, all braced by sheet metal, d^3, top and bottom. (Clearly shown in Fig. 2.) The clearance-spaces between the slats are for ventilation chiefly. The upright slats *d* make the partition strong and firm. The rods, top and bottom especially, are for purposes to suspend the partition at top, and fasten same at bottom. The sheet-metal top and bottom brace all parts compactly. Thus the partitions D are made most durable, avoid chafing of the animals, save space, and otherwise possess advantages of great adaptability for the stock or cattle. The partitions D are suspended by rods E, the lower ends of which properly connect to top rod d^1 near end thereof. At top the rod E has hook end to engage a slide-bar, *e*. The slide-bar *e* is secured to the face of a horizontal support, *e′*, this being mortised its entire length to allow for the sliding action of rods E upon the bar *e*, the said support *e′* being properly secured top of the roof within car. (See Figs. 1 and 2.) The partitions D thus suspended from the top bar *e*, the operator can readily slide the said partition along to the required position for forming the stall preparatory to fastening. To fasten the partition D, its lower rod d^2 has its ends extended to engage the top of horizontal bars F, which are arranged along the sides of the car at bottom and secured to rests or props. (See Figs. 1 and 2.) The bottom bars F have pin-holes, so that a pin, *f*, passing through the eye in each end of the rod d^2, and also through the said bars F, fastens the partition. In order, however, to form a more secure fastening for the stall, prevent same from being lifted out of its place, and, especially, to prevent any action of the cattle or stock from dislocating the stall, I secure same further by means of a coupling-

link, f^1. The link f^1 (see Figs. 1, 2, 4) is of right-angled form, so as first to be placed on the eye of the bars d^2, and at same time be passed under the bottom bars F. The pin f then is dropped through the rod d^2, the horizontal bars F, and also through link f^1, as shown. The bottom bars F, to make allowance for the side doors, can be in hinged sections, (see Fig. 1 at f^2,) so that each section can be folded or turned out of the way. G, Fig. 3, is a main water-pipe secured alongside of the running board top of roof. The pipe G connects by coupling-hose to every other section of pipe, and receives its supply of water from a tank, or other well-known manner. g is a branch pipe connected to main pipe G, and leading through the roof to feed the troughs. H is an iron railing, top of roof, as a guard for the operator while manipulating the lift-bars.

My improved devices are simple, readily constructed, and possess advantages for stock and freight purposes readily apparent.

I claim—

1. The lift-bars C C′, having a hinge-joint, c', for raising and lowering the troughs, substantially as set forth.

2. The stall consisting of the partitions D, hook-rods E, top sliding bar e, coupling-link f^1, and lower bars F, as and for the purpose set forth.

In testimony of said invention I have hereunto set my hand in presence of witnesses.

JAMES B. CALKINS.

Witnesses:
TH. SESFERT,
WM. HUNEKE.