

(No Model.)

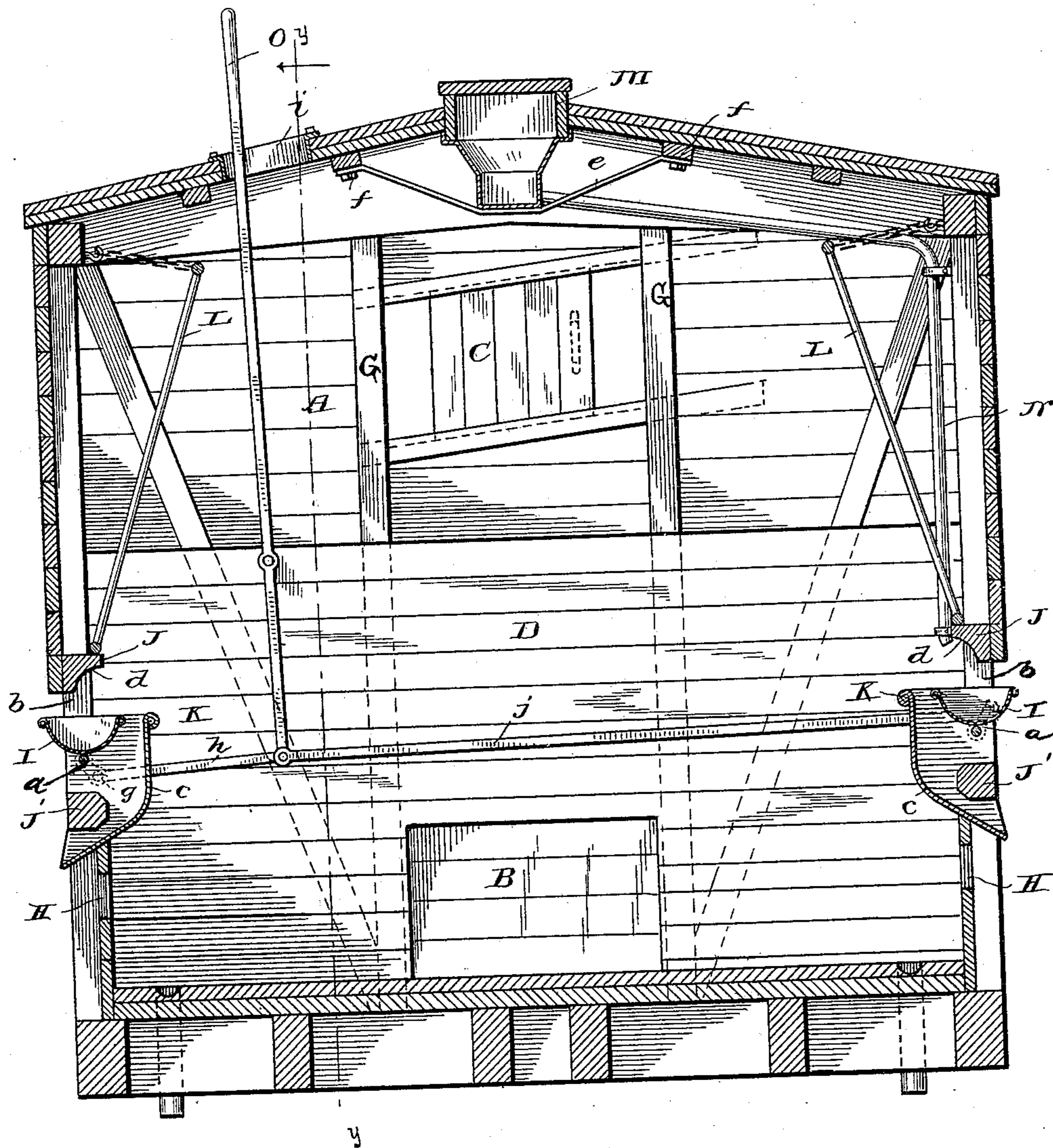
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G. D. BURTON.
STOCK CAR.

No. 427,968.

Patented May 13, 1890.

Fig. 1.



Witnesses

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(No Model.)

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Fig. 3.

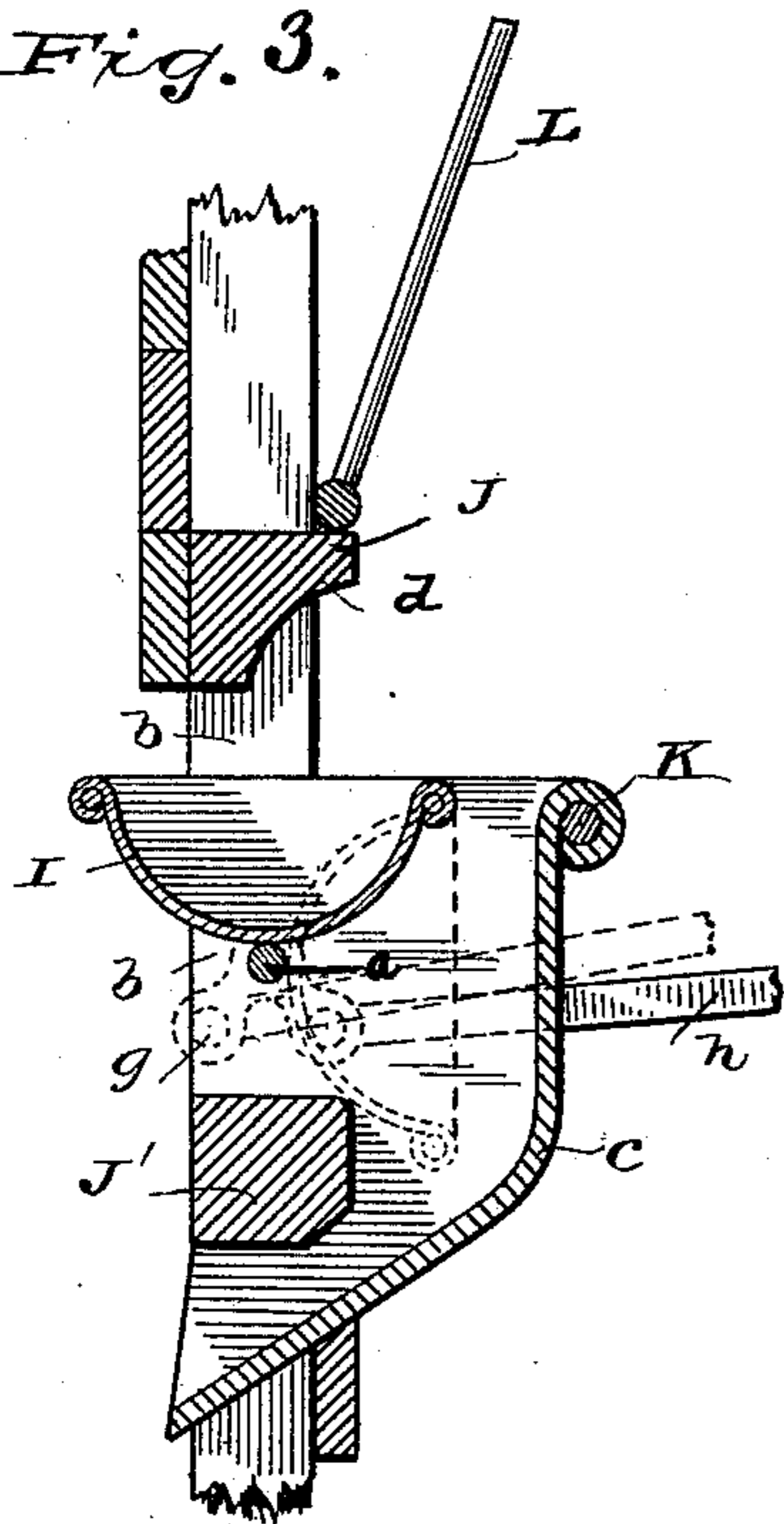
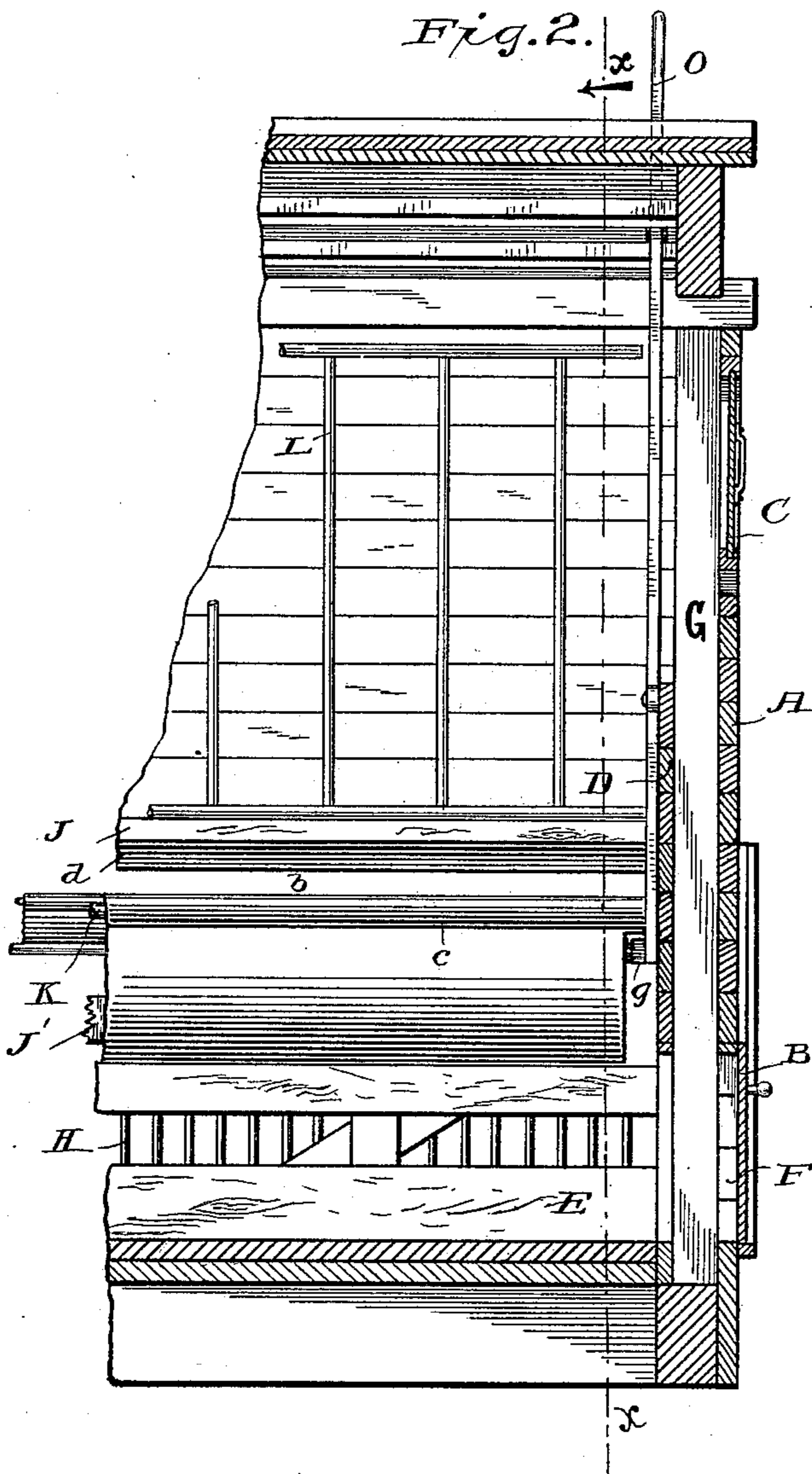


Fig. 2.



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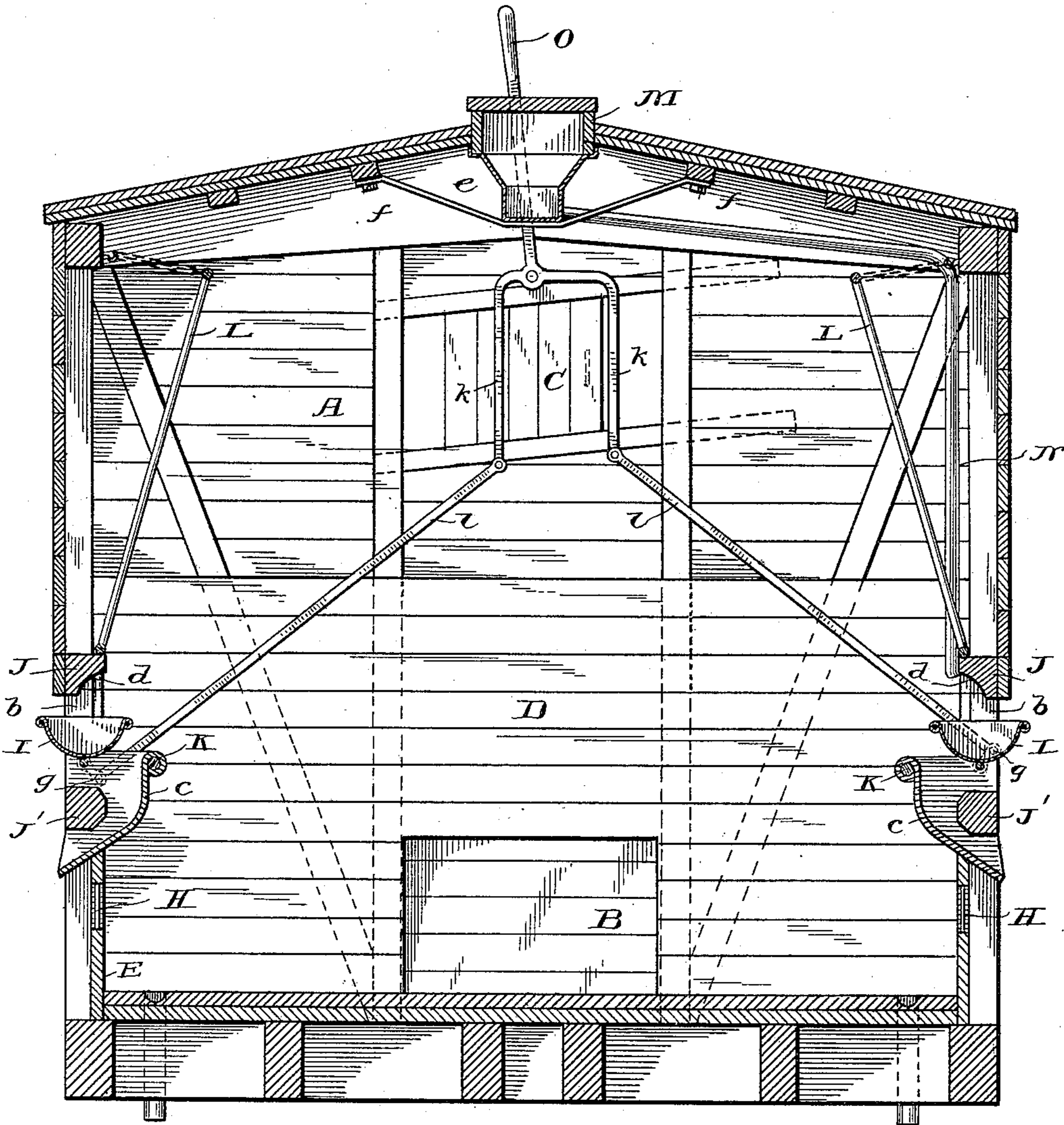
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Fig. 4.



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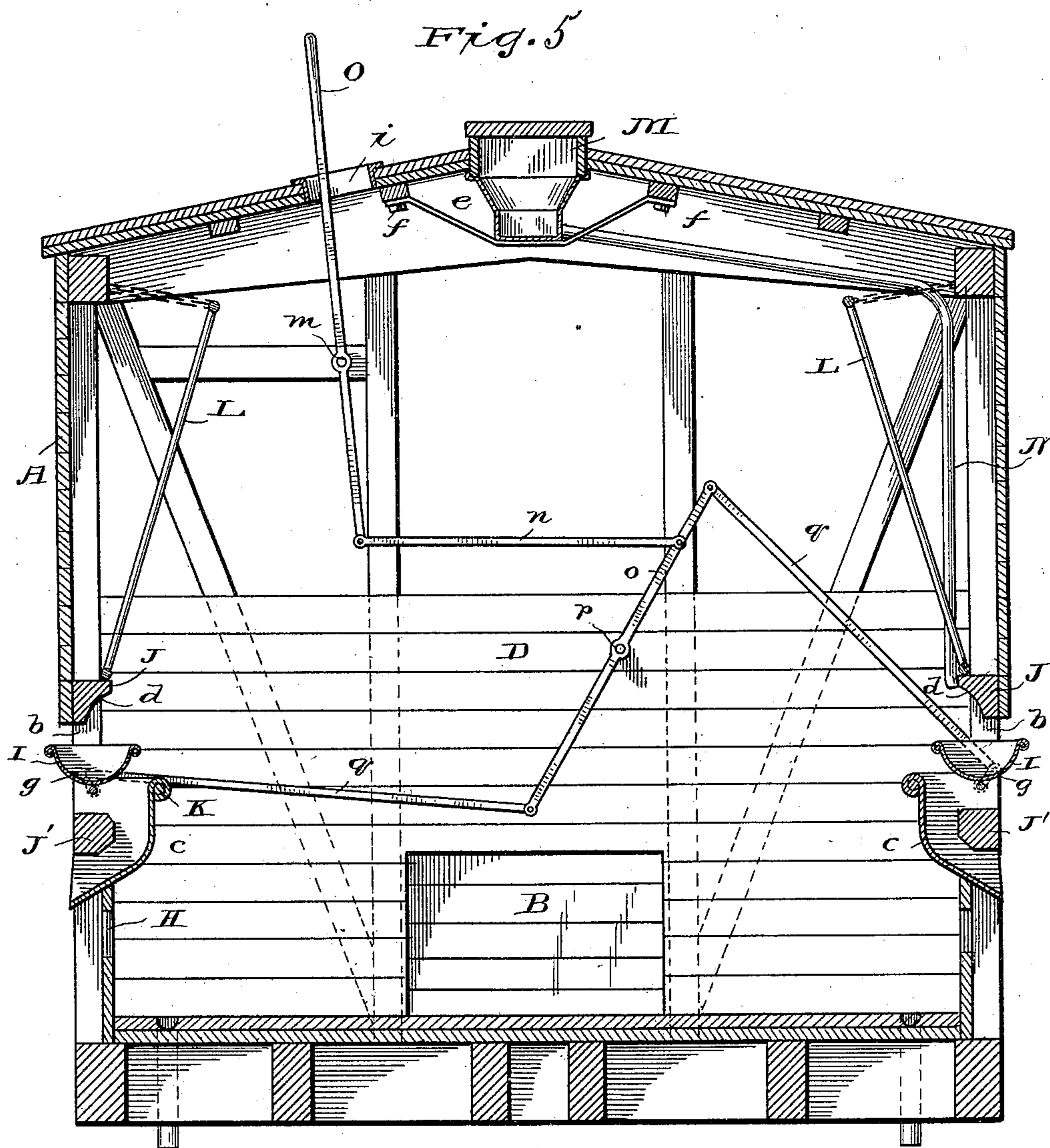
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STOCK CAR.

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UNITED STATES PATENT OFFICE.

GEORGE D. BURTON, OF BOSTON, MASSACHUSETTS.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 427,968, dated May 13, 1890.

Application filed June 23, 1888. Serial No. 277,965. (No model.)

To all whom it may concern:

Be it known that I, GEORGE D. BURTON, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Stock-Cars, of which the following is a specification, reference being had to the accompanying drawings.

My invention relates to improvements in railway-cars for the transportation of live stock, and has for its general object to provide a car of this class with improvements and appurtenances necessary for insuring the comfort and preservation of the animals while in transit.

With this object in view my invention consists in the improved construction, arrangement, and combination of parts hereinafter fully described, and afterward specifically pointed out in the claims.

Referring now to the accompanying drawings, Figure 1 is a vertical transverse section on the line $x x$ of Fig. 2, looking in the direction of the arrow in said latter figure and showing my invention complete; Fig. 2, a longitudinal vertical section taken on the line $y y$ of Fig. 1, looking in the direction of the arrow in said latter figure and showing the portion of the side of the car adjacent to one end thereof, the remaining portion of the car being broken away for the sake of space. Fig. 3 is a detailed fragmentary view showing the pivotally-mounted feed-trough in full lines, the immediately adjacent sides of the car and the dumped or inverted position of the feed-trough in dotted lines. Figs. 4 and 5 are views substantially similar to Fig. 1, and showing, respectively, two modifications of the trough-dumping mechanism.

Like letters of reference indicate like or corresponding parts in the several views of the drawings.

Referring to the drawings by letters, A represents the end of the car, which is closely boarded up, as usual, in the manner of a box-car; B, the lower door, and C the upper door, both covering openings in the end A and arranged in different horizontal planes. Through the door B may be introduced heavy freight—such as railroad-iron—and lumber may be inserted through the upper door C,

both doors B and C being of any well-known or approved construction and of the required dimensions to accommodate the character of freight inserted therethrough. As will be seen by inspection of Figs. 1 and 2, there is a supplemental lining D arranged parallel with the end boarding A and extending up vertically to a distance approximately half the height of the car, as shown clearly in the aforesaid figures. This lining D is provided for the purpose of insuring strength and rigidity to the ends of the car-body and offering a smooth wall adjacent to the animal or animals in the extreme ends of the car, and has an opening E coincident with and of the same dimensions as the opening F covered by the door B. Inasmuch as the lining D extends but half-way of the height of the car, the door C communicates directly with the interior space of the car. The respective lining A and D, which constitute the end frame-work of the car-body, are separated and held from each other by the posts G, as shown in Fig. 2.

H is a grated portion extending around the lower part of the car near the floor-line for the admission of air.

I I are feed-troughs pivotally mounted upon longitudinal journals or shafts a , which latter are secured in suitable bearings in longitudinal openings in the side of the car, said openings existing between stout longitudinal binding-timbers J J' on each side of the car and separated sufficiently to form the aforesaid opening at a sufficient height above the floor-line to receive the feed-troughs and to permit a rocking motion of the latter therein. b designates the open space referred to extending longitudinally from each end of the car and on each side thereof to the central door. (Not shown.) The timbers J J' are separated a sufficient distance to permit the free rocking movement of the trough within the opening b , and at the same time allowing food to be introduced from the exterior of the car through the opening b into the feed-troughs I.

K designates a guard-rail, which is of the required size to resist all ordinary pressure from within and extends on each side of the car near and parallel with the inner edge of the troughs when the latter are in their hori-

zontal position, and *c* indicates a deflector, desirably made of galvanized iron and extending downwardly from the guard-rail *K*, then obliquely outward through the lower portion 5 of the opening *b* below the troughs *I*, whereby when said troughs are inverted inwardly their dumped contents will strike against and be deflected by the said deflector *c c* downward and outward, the mouth of this chute being 10 below the timber *J'*, as shown in Fig. 1. Each timber *J* is located as near to the troughs *I* as will permit the latter to turn freely upon their axes and is cut away at *d* on its inner edge in order to give more space for the heads of the 15 animals when they desire to gain access to the troughs for the purpose of drinking or feeding. By this construction the troughs are free to dump inwardly, in the manner shown in dotted lines in Fig. 5.

20 *L L* designate folding hay-racks, which are pivotally mounted at their lower ends upon the inner projecting top surface of the timbers *J J'*, which latter form a rigid support for said hay-racks and allow the same to be 25 brought down in close proximity to the feed-troughs *I I*, so that the animals can readily reach up and pull therefrom the contents.

M represents a water tank or reservoir conveniently located beneath the running-board 30 on top of the car, securely supported in its overhead position by means of the bracket *e*, bolted at each end to the rafters of the car-roof, as shown at *f f* in Fig. 1. The troughs *I I* are supplied with water from the water-tank *M* by means of the supply-pipes *N*, which 35 may be of any approved construction or arrangement.

As will be noticed by reference to Fig. 1, the supply-pipe *N*, designed to carry the water 40 to the feed-troughs *I*, terminates slightly above the curved recessed portion *d* of the timbers *J*, so that no obstruction will be present which would hinder the introduction of the heads of the animals in the feed-troughs.

45 As will be understood by those skilled in this art, there are two independently-moving feed-troughs on each side of the car for the reason that there is a central door in each side of the car which prevents a continuous feed- 50 trough extending farther along the side of the car from end to end.

The journals or shafts of the feed-troughs *I I* are provided with pitmen *g g* rigidly secured to one end of said journal adjacent to 55 the end lining *D* of the car, as shown in Fig. 2 of the drawings.

h is a link-rod connecting pitman *g* with the operating-lever *O*, which extends up vertically through a perforation *i* in the roof of 60 the car out beyond the plane of said roof, within reach of the brakeman who passes over the running-board. *j* is another link-rod connecting the operating-lever *O* with the crank-arm *g* on the other side of the car. 65 Thus by grasping and moving the lever *O* two troughs *I I* on opposite sides of the car

are simultaneously dumped to the position shown in dotted lines in Fig. 3.

It will be understood that a trough-dumping mechanism is placed at the other end of 70 the car, so that the two troughs on the other side of the central doors may be moved in the same manner as those just described.

I have shown in Figs. 4 and 5 various equivalent, but slightly different, arrange- 75 ments whereby the same end may be accomplished by mechanism which I regard as mechanical equivalents of that shown in Figs. 1 and 2. In Fig. 4 is shown a slightly different construction, in which a bifurcated oper- 80 ating-lever *O* is pivotally mounted on a suitable stud at the end portion of the car and has its arms or prongs *k k*, respectively, connected with the crank-arms *g g* by the link-rods *l l*, which correspond with links *h j* in 85 Fig. 1, and are loosely hinged at both extremities to their respective connections. Thus by moving the lever *O* (shown in Fig. 4) the troughs *I I* may be inwardly dumped to the position shown in dotted lines, Fig. 3. 90 Again, in Fig. 5 is shown another somewhat different trough-dumping mechanism, consisting of a hand-lever *O*, fulcrumed at *m* and loosely connected at its lower extremity to one end of the link *n*, which in turn is 95 loosely jointed at its other end to the upper arm of the lever *o*, fulcrumed at *p* and hinged at each end to a link-rod *q*, which connects one end of the lever *o* with the crank-arms *g g*. By moving lever *O* motion is communi- 100 cated to the lever through the intermediate link *n*, and the rocking of lever *O* about its pivot *p* simultaneously actuates both link-rods *q q*, and consequently dumps both troughs *I I* at the same time. 105

When the trough is inverted into the position shown in dotted lines in Fig. 3, the binding-timber *J'* serves as a limiting-stop to the further descent of the trough.

Having described my invention, what I 110 claim, and desire to secure by Letters Patent, is—

1. In combination, a feed-trough, a pivot-rod upon which it is mounted extending beyond its end and having suitable bearings 115 secured to the body of the car, a crank-arm secured to each pivot-rod, a lever pivoted to the end of the car, links connecting it with said crank-arms, a handle extending above the roof of the car, and a link connecting said 120 handle with the pivoted lever, as set forth.

2. In combination, a feed-trough in each side of a car, a pivot-rod for each trough extending beyond its end and having suitable bearings secured to the body of the car, a 125 crank-arm secured to each pivot-rod, a lever pivoted to the end of the car, links connecting it with said crank-arms, a handle extending above the roof of the car, and a link connecting said handle with the pivoted lever, as 130 set forth.

3. In combination, a feed-trough in each

side of a car, a pivot-rod for each trough ex-
tending beyond its end and having suitable
bearings secured to the body of the car, a
crank-arm secured to each pivot-rod, the one
5 extending downward and the other upward
from its pivot-rod, a lever pivoted to the end
of a car, a link connecting each of its ends
with one of said crank-arms, a handle-lever
pivoted to the end of the car having its up-

per end above the car, and a link connecting 10
said handle-lever with the first pivoted lever,
as set forth.

In testimony whereof I affix my signature in
presence of two witnesses.

GEO. D. BURTON.

Witnesses:

F. R. HARDING,
W. H. NASH.