

(No Model.)

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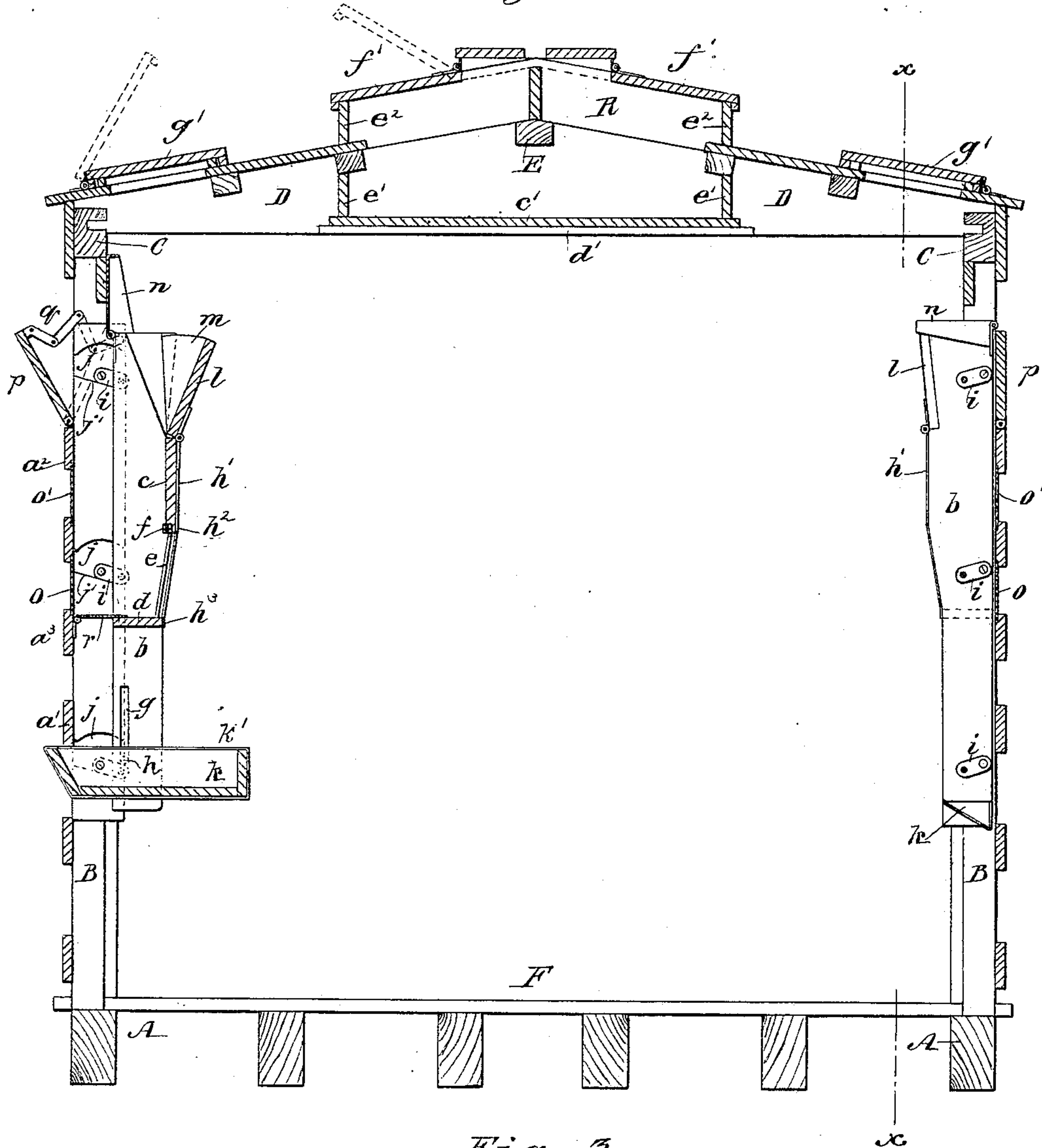
F. E. CANDA.

CATTLE CAR.

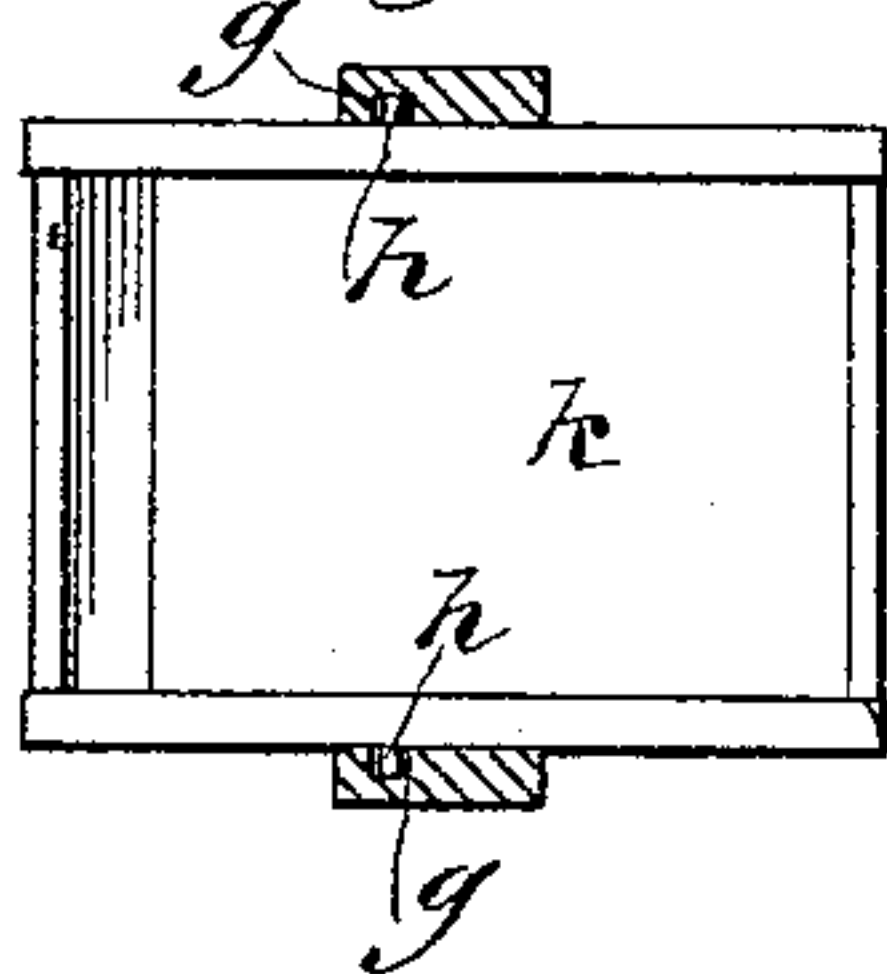
No. 344,161.

Patented June 22, 1886.

*Fig. 1.*



*Fig. 3.*



WITNESSES:

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INVENTOR:

*F. E. Canda*

BY *Munn & Co*

ATTORNEYS.

(No Model.)

2 Sheets—Sheet 2.

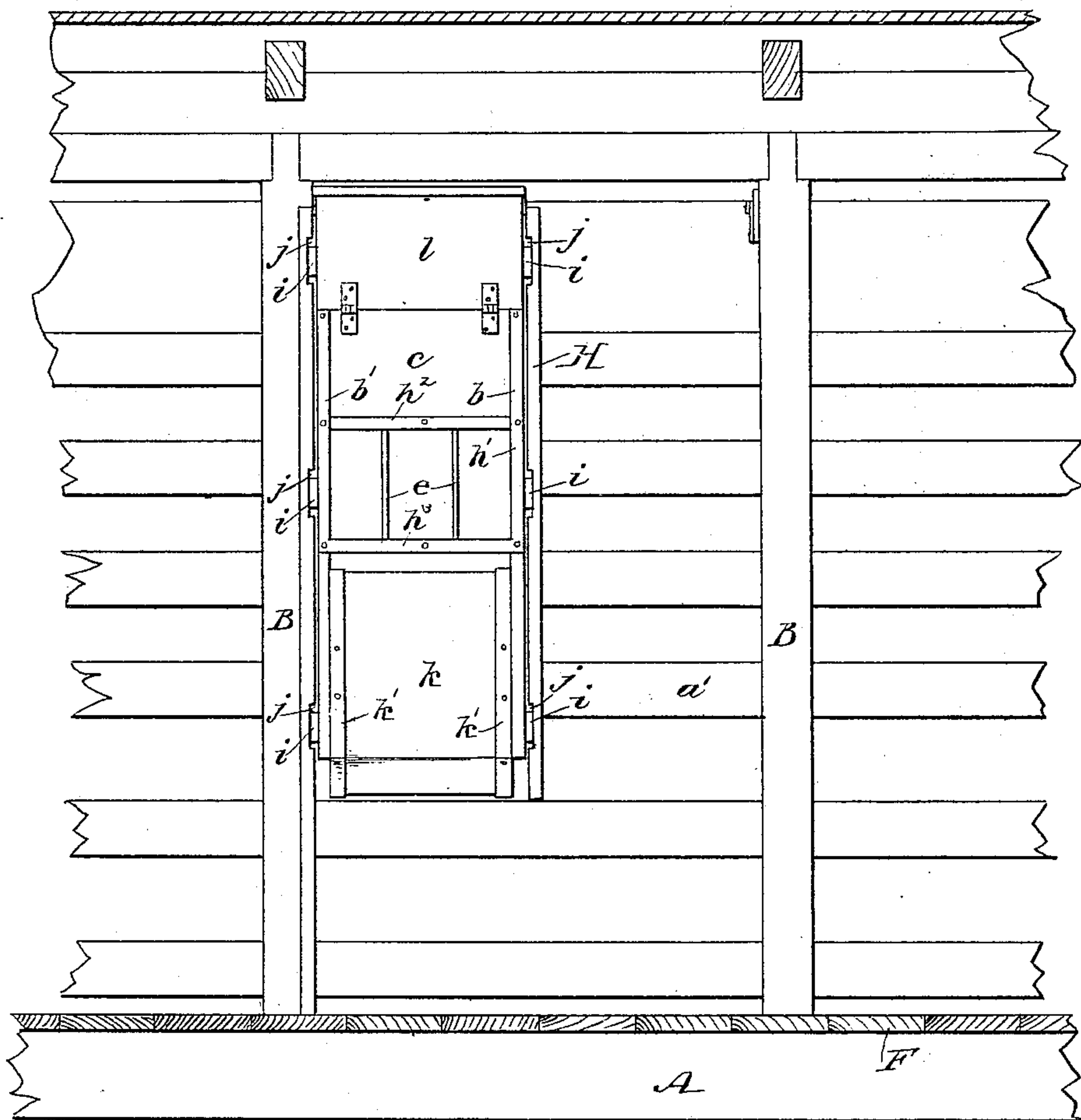
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*Fig. 2.*



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# UNITED STATES PATENT OFFICE.

FERDINAND E. CANDA, OF NEW YORK, N. Y.

## CATTLE-CAR.

SPECIFICATION forming part of Letters Patent No. 344,161, dated June 22, 1886.

Application filed September 24, 1885. Serial No. 178,003. (No model.)

*To all whom it may concern:*

Be it known that I, FERDINAND E. CANDA, of the city, county, and State of New York, have invented a new and Improved Feeding-Rack for Cattle-Cars, of which the following is a full, clear, and exact description.

My invention relates to the construction of that class of cars employed to carry cattle in one direction and freight or merchandise in the other.

The invention consists of a feeding-rack and water-trough of novel construction, and an arrangement of food-bins, together with certain novel features of construction, to be hereinafter described, and specifically pointed out in the claims.

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 is a vertical cross-sectional view of a car provided with my improved feeding-rack and storage-bin, the view being taken on a broken line, and showing the rack as extended and in section on one side and as closed or folded in on the other, the side of the rack in this case being shown. Fig. 2 is a face view of the rack, the car being shown in longitudinal vertical section taken on line *x x* of Fig. 1; and Fig. 3 is a plan view of the water-trough, representing its connection with the side boards of the feeding-rack, which boards are shown in section.

Referring now to the general construction illustrated in the drawings, A A represent the sills, B B the posts, C C the plates, D D the earlings, E the ridge-pole, F the floor, and *a' a' a'* the siding or side strips, of an ordinary form of cattle-car.

The manger or feeding-rack, which constitutes the main feature of my invention, is composed of two side boards, *b b'*, which are united by a face-plate, *c*, and a cross or bottom strip, *d*, the side boards being beveled inward from the face-plate to the point where the bottom strip is secured, and the intervening space being provided with rack-bars *e e*, which are stepped in the strip *d*, and extend upward to the face-plate *c*, to which they are fixed by a metallic clip or strip, *f*. The side boards extend quite a distance below the bottom strip, and this lower extending portion is slotted at *g g*, to

admit the trunnions *h h* of the water-trough *k*, one end of which is preferably beveled, as shown. An outwardly-swinging feeding-mouth, *l*, is hinged to the upper edge of the face-plate *c*, said mouth being formed with metallic wings *m m*, which fit within recesses formed on the inner faces of the side boards, and these wings constitute a portion of the side walls of the feeding-box when the mouth is opened outward, as shown on the left in Fig. 1. The whole device is closed from above by a cover, *n*, which is hinged to the side boards, *b b'*.

Two or more, but preferably three, links, *i i*, are pivotally connected to the outer faces of the side boards, *b b'*, in about the relative positions shown, and the other ends of these links are in turn pivotally connected to two of the posts B; or, if a small rack is used, the set of links on one side may be pivoted to one of the posts B, and the set on the other side to a vertical strip, H, which is fixed to the siding-strips, recesses *j j* being formed in the post and strip H, to allow the links *i i* to swing upon their pivoted connection.

In Fig. 1 the feeding box or rack on the right is represented as being folded in, at which time the links *i i* point backward from their connection with the post B and strip H at an angle slightly above a horizontal line, and the water-trough *k* hangs with its under side toward the interior of the car and its beveled end toward the floor, the rectangular end of the trough being just under the bottom strip, *d*. When it is desired to use the feeding-rack, it is forced upward and outward, and then downward, until the links *i i* point slightly downward and rest upon the beveled shoulders, which constitute the lower edges of the recesses *j j*, at which time the water-trough may be turned down so that its rectangular end will project within the car, while its beveled end will project slightly outside of the car, the trough being held in the position indicated, owing to the fact that its upper edge will abut or bear against the siding-strip marked *a'*, as is clearly shown on the left in Fig. 1. When the feeding-rack is in the extended or opened position, it cannot be folded in or shoved back without being slightly lifted, so that it is practically locked in place, while, when closed in, the rack must be lifted before it can be



moved outward, the motion of the rack being a combined vertical and lateral motion to or from the car-sides.

The outer side of the feeding-rack is closed by sheet-metal plates  $o$   $o'$ , which are secured to the post B and strip H, the plates closing the spaces between the side strips. Above the upper siding-strip,  $a^2$ , the box is closed by a trap,  $p$ , hinged to said strip, and limited as to outward throw by a linked bar,  $q$ , as best shown on the left in Fig. 1. The trap  $p$  is centrally hinged and arranged to be moved to either of the three positions indicated in Fig. 1. When the rack is extended, the trap is normally held in the position shown in dotted lines on the left, and, with the plates  $o$   $o'$  and side strips of the car, acts to completely close the outer side of the box, and prevent the possibility of a stray spark or cinder entering the feeding-box and igniting the hay or fodder contained therein.

The space between the bottom strip,  $d$ , and the siding-strip  $a^3$ , which exists only when the feeding-rack is thrown out for use, is at that time closed by a trap,  $r$ , which is hinged to the strip  $a^3$ , and arranged to fall down automatically upon the bottom  $d$  when the rack is thrown out, but to be folded back against the plate  $o$  when the rack is in the position shown on the right in Fig. 1.

A long bin or box, R, is formed along the top of the car by bottom pieces, as  $c'$ , which rest on and are supported by cleats  $d'$ , which are secured to the lower edges of the carlings. The lower halves,  $e'$ , of the sides of the bin R extend from the bottom pieces,  $c'$ , to the center purlins and reach between the carlings, and the upper halves,  $e^2$ , extend a short distance above the roof and run along the full length of the car. The covers of the bin (shown at  $f'$ ) are hinged to swing upward, as indicated in dotted lines. Above each of the feeding-boxes there is a trap,  $g'$ , hinged to swing, as shown. The hay or other food may be thrown into the feeding-boxes through the traps  $g'$ , the cover  $n$  being at this time lifted, and the feeding-mouth  $l$  being moved to the position shown on the left in Fig. 1; or the food may be introduced from the side of the car by pulling out the trap  $p$ . Water is poured into the outwardly-projecting end of the trough  $k$ , or may be put in from the inside.

The edges of the side boards are protected by metallic bands  $h'$ , and other bands,  $h^2$   $h^3$ , protect, respectively, the lower edge of the face-plate  $c$  and the outer edge of the bottom strip,  $d$ . The water-trough is also bound with metallic strips  $k'$ .

From the construction described it will be

seen that when the car is used for the purpose of transporting cattle it will afford a means for easily feeding and watering them; but when the car is on the return-trip and loaded with freight or merchandise, the feeding-boxes may be folded back almost within the line of posts, where they will be out of the way, and not occupy available storage-space; nor will they be liable to injury, owing to their strong protecting metallic bands, and to the peculiar mounting arrangement, which, as stated, acts to lock the rack in either of the positions shown.

I am aware that cars have been built with folding feeding-racks, and also that cars have been provided with food-bins arranged along the roof of the car.

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

1. An expansible and compressible manger for cattle-cars, in which the forward portion of the front and the sides are rigidly connected and the whole device mounted on short links, whereby the gravity of the manger will hold it locked in place in either the open or closed position, substantially as set forth.

2. The combination, with a car, of a feeding-rack consisting, essentially, of side boards,  $b$   $b'$ , front plate,  $c$ , bars  $e$ , and bottom board,  $d$ , said rack being mounted by links  $i$   $i$ , substantially as described.

3. The combination, with a car, of a feeding-rack consisting, essentially, of side boards,  $b$   $b'$ , front plate,  $c$ , bars  $e$ , and a bottom board,  $d$ , the side boards being slotted at  $g$ , to engage with the trunnions of a water-trough, and the whole device being connected to a post, B, and vertical strip H by links  $i$   $i$ , substantially as described.

4. The combination, with a car, of a folding feeding-rack provided with a hinged mouth,  $l$ , and a cover,  $n$ , substantially as described.

5. In a car, the combination, with a folding feeding-rack, substantially as described, of strips  $h'$   $h^2$   $h^3$ , applied substantially as described.

6. The combination, with a feeding box or rack, substantially as described, having downwardly-projecting side boards, slotted at  $g$   $g$ , of a water-trough provided with trunnions  $h$   $h$ , substantially as described.

7. The combination, with a car and a feeding-rack, substantially as described, connected thereto by links  $i$   $i$ , of a trap,  $r$ , substantially as described.

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Witnesses:

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