

(No Model.)

2 Sheets—Sheet 1.

F. E. CANDA.

CATTLE CAR.

No. 345,481.

Patented July 13, 1886.

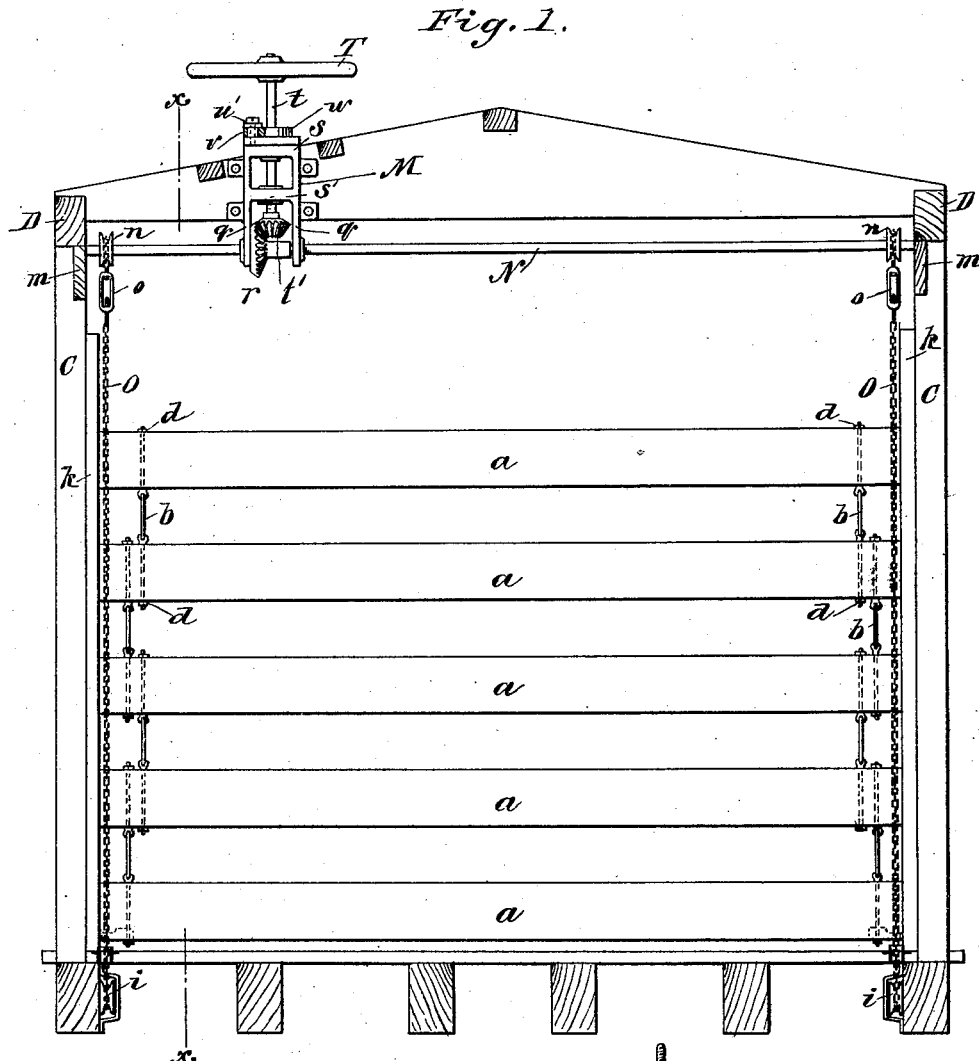
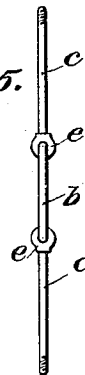
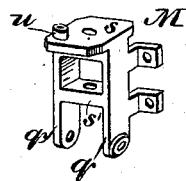


Fig. 4.

Fig. 5.

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Fig. 2.

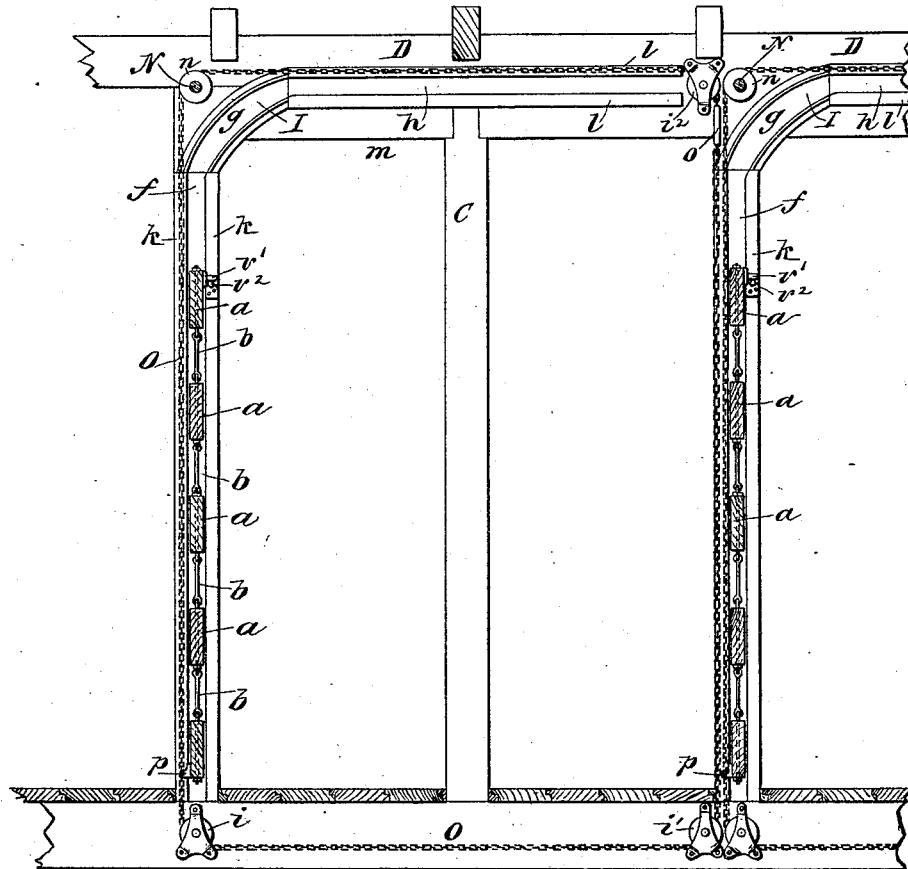
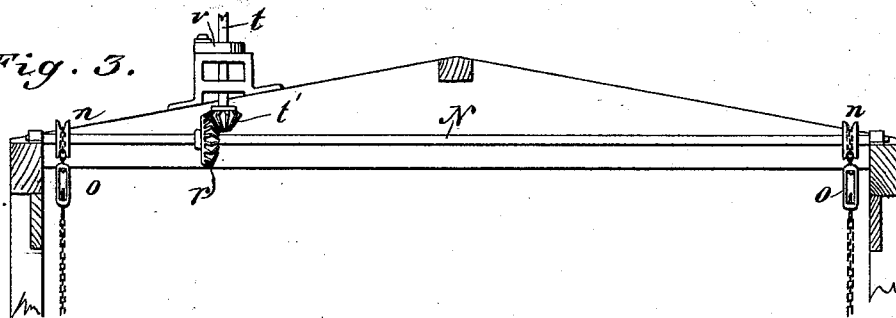


Fig. 3.



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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. 345,481, dated July 13, 1886.

Application filed October 16, 1885. Serial No. 180,091. (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 certain new and useful Improvements in Cattle-Car Partitions and Mechanism for Operating the Same, of which the following is a full, clear, and exact description.

My present invention relates to the construction and operation of that class of gates or partitions by which cattle-cars are divided into stalls or compartments, the object of the invention being to provide a gate which will be strong, durable, and easily moved to a position to divide the car into stalls or compartments, or to a position just beneath the car-roof, it being understood that the class of cars employed to carry cattle in one direction are usually used to transport freight in the other direction, in which latter case it is necessary that the body of the car be cleared of the partitions by which the car was divided into stalls.

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 side view of one of the partitions or gates, the car being shown in vertical cross-section. Fig. 2 is a vertical sectional view of two of the gates and a portion of one of the inner sides of a car, the view being taken on the line *xx* of Fig. 1. Fig. 3 is a view of a modified form of operating mechanism. Fig. 4 is a perspective view of one of the brackets by which the operating mechanism is carried, and Fig. 5 is a view of a set of eyebolts and their connecting-link.

In the construction illustrated in the drawings and forming the subject-matter of this application, the sliding partitions or gates are formed of a number of bars or strips, *a a*, united by links *b b* and eyebolts *c c*, a connecting-link, *b*, and two eyebolts being preferably forged together, and the bars being bored out to receive the shanks of the eyebolts, which are held in place by nuts *d d*, as best shown in Fig. 1. The eyebolts are formed with shoulders *e e*, in order that the distance between the bars *a a* may be clearly defined and that a purchase may be afforded, by which the bolts are clamped to the bars. By referring to Fig. 1 it will be seen that each of the bars *a a*, except the upper and lower ones, are

bored out twice at each end, once for the eyebolt of the link by which the bar is suspended, and once for the eyebolt of the link suspending the next lower bar. The gates so constructed are mounted in runs or ways *f, g*, and *h*, the runs *f* being formed by strips *k k*, which are secured to the intermediate posts, *C C*, the ways *g* by segments *l'*, which are formed with non-concentric walls, and the ways or runs *h* by strips *l l*, that are secured to the plates *D D* and facing-strips *m m*, so that the gates may be lowered to the ways *f*, to divide the car into stalls or compartments, or be raised to rest within the ways *h*, where they will not interfere with the storage of freight within the body of the car.

In order that the gates may be easily moved from one to the other of the positions just mentioned, I provide the following manipulating mechanism: A shaft, *N*, which carries two chain-wheels, *n n*, is mounted in bearings which are formed in brackets secured to the inner faces or to the tops of the plates *D D*, and in connection with each of the chain-wheels named there are arranged three sheaves, *i i' i''*, in substantially the relative positions shown in Fig. 2—that is to say, the sheave *i* is carried by a bracket secured to the sill *A*, directly beneath the chain-wheel, the sheaves *i' i''* by brackets secured to the plate and sill, so that when the chain *O* is placed in position it will run in substantially rectangular lines about the sheaves and chain-wheel. A turn-buckle, *o*, is fixed in the chain *O* in a position such that when the gate is lowered to the ways *f* it will be close under the sheave *i'*. The chains *O O* are connected to the lower bar of the gate by brackets *p p*. The shaft *N* runs through and is partially supported by the arms *q q* of a bracket, *M*, which is secured to the side or top of one of the carlings and between the said arms, *q q*. The shaft *N* carries a bevel gear-wheel, *r*, which is fixed to the shaft. The bracket *M* is formed with two webs, *s s'*, which reach between the arms *q q* and serve as bearings for a vertical shaft, *t*, which carries a hand-wheel, *T*, and a bevel-pinion, *t'*, that engages with the gear *r*. The web *s* is formed with an upwardly-projecting lug, *u*, which serves as the pivotal support for the pawl *v*, that engages with the ratchet *w* of the

shaft *t*, said pawl being socketed to fit over the lug *u*, to which it is preferably held by a washer, *u'*, that is secured to the lug by a tap-bolt. The pawl is, as usual, pressed against the ratchet by a spring. In case the bracket is to be secured to the side of the carling, such a bracket as is shown in Figs. 1 and 4 is used; but if the bracket is to be fixed to the top of the carling I employ the construction illustrated in Fig. 3.

When it is desired to raise or lower the gate, the hand-wheel *T* is rotated or turned in the desired direction, and the shaft *N*, with its chain-wheels *n n*, turned accordingly. This movement of the shaft *N* and its chain-wheels will carry the gate upward or downward, according to the direction in which the wheel *T* is rotated.

In order that the gate may be suspended in position just above the floor, I provide the upper bar with two stops, *v' v'*, one near each end, which are arranged to strike upon stops *v² v²*, that are secured to the strips forming the ways *f*, by which arrangement the connecting-links will be relieved of all compression-strain.

In my application No. 180,092, filed concurrently herewith, I illustrate and describe a gate consisting of bars united by links, every alternate link being secured to the face of the bars, and such construction I do not claim herein.

I am aware that gates for cattle-cars have been constructed wherein the bars were united by chain-links, and such construction I do not claim; nor do I claim a gate connected by rigid links that are secured directly to the gate-bars.

In my application, No. 175,221, filed August 24, 1885, I have illustrated and described

a partition or gate composed of slats connected by a flexible connection, said gate being adapted to guides and connected to a proper mechanism at the bottom of the gate only, and in my application, No. 180,092, filed on the 16th day of October, 1885, I have illustrated and described a gate composed of slats or bars united by links that are connected by hinged joints, and in this case I do not claim, broadly, either of the constructions referred to; but what I do claim is a gate wherein the bars are united by eyebolts.

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

1. A gate for cattle cars consisting of bars *a a*, united by rigid links *b*, which are secured to the bars by eyebolts *c c*, that pass through said bars, substantially as set forth.

2. The combination, with a cattle-car formed with ways *f*, *g*, and *h*, of a gate consisting of bars *a a*, united by links *b*, that are secured to the bars by eyebolts *c c*, endless chains *O O*, shaft *N*, chain-wheels *n n*, sheaves *i i'*, and an operating mechanism, substantially as described.

3. The combination, with a cattle-car formed with ways *f*, *g*, and *h*, of a gate consisting of bars *a a*, united by links *b*, that are secured to the bars by eyebolts *c c*, endless chains *O O*, connected to the lower gate-bar, shaft *N*, carrying chain-wheels *n n*, and bevel-gear *r*, sheaves *i i'*, bracket *M*, shaft *t*, and pinion *t'*, substantially as described.

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Witnesses:

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