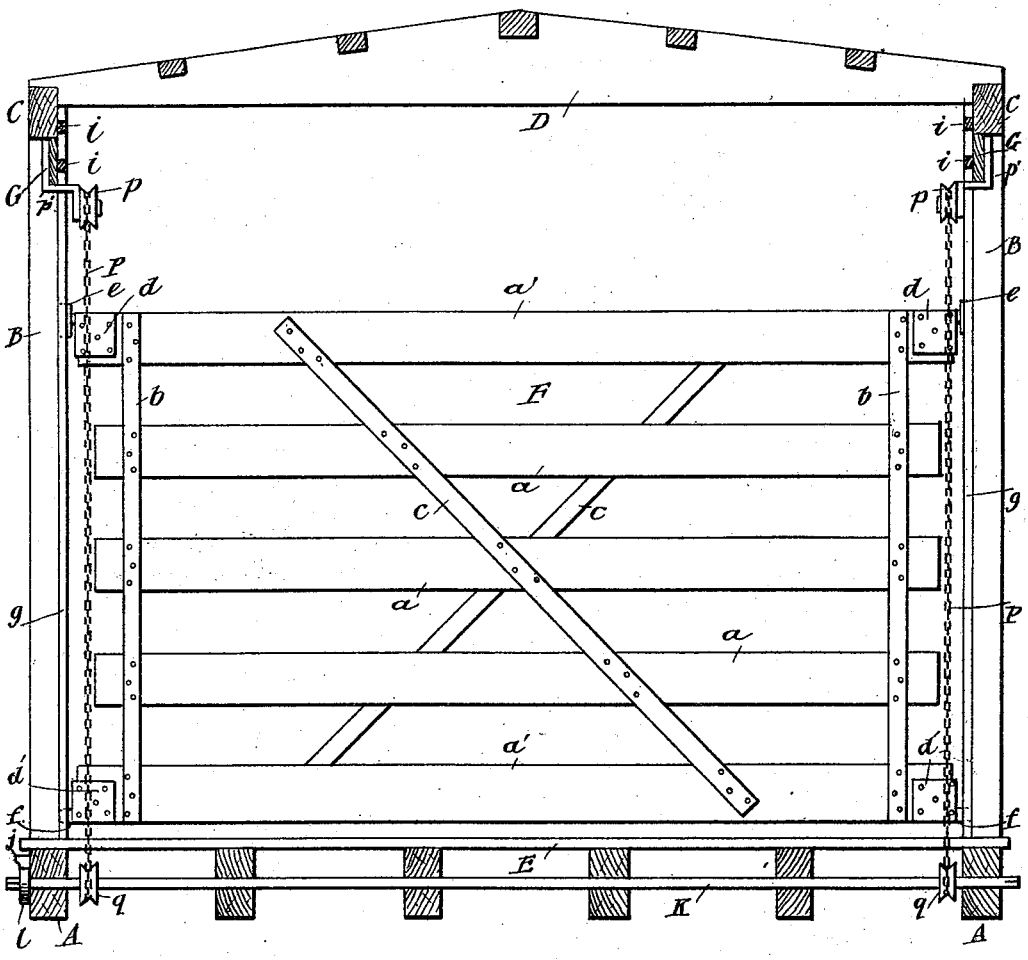
(No Model.) 2 Sheets—Sheet 1.

F. E. CANDA.

CATTLE CAR.

No. 456,399. Patented July 21, 1891.

Fig. 1.



WITNESSES:

J. C. Clark.

C. M. Clark

INVENTOR:

F. E. Canda

BY Munn & Co

ATTORNEYS

(No Model.) 2 Sheets—Sheet 2.

F. E. CANDA.

CATTLE CAR.

No. 456,399. Patented July 21, 1891.

Fig. 3.

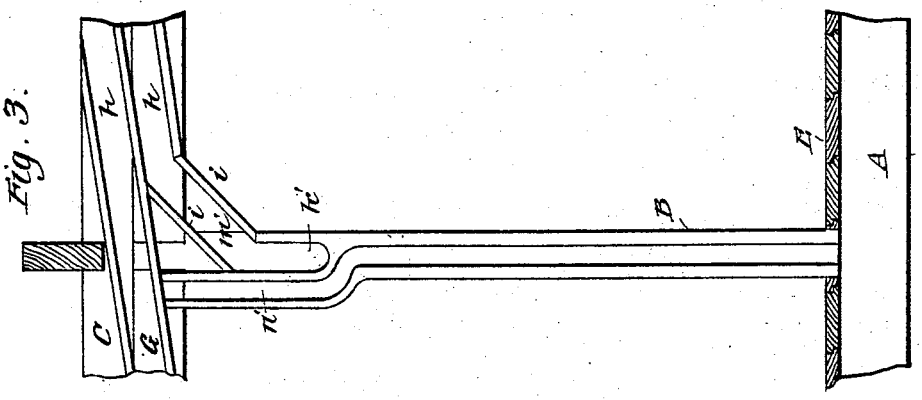
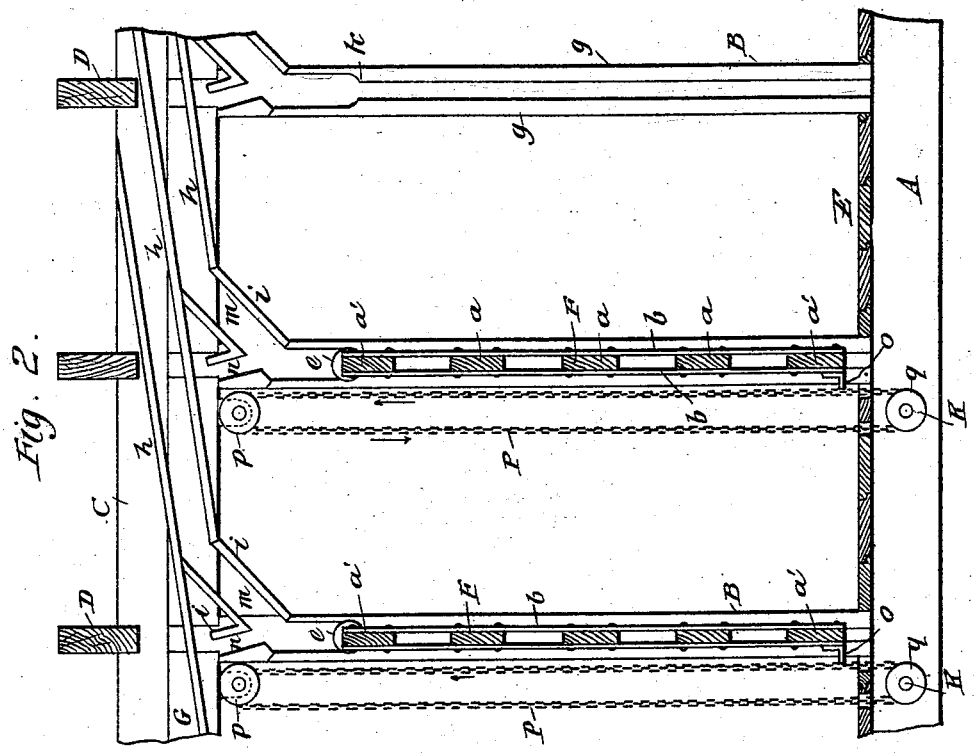


Fig. 2.



WITNESSES:

J. C. Clark.

E. M. Clark

INVENTOR:

F. E. Canda

BY

Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

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

CATTLE-CAR.

SPECIFICATION forming part of Letters Patent No. 456,399, dated July 21, 1891.

Application filed August 19, 1890. Serial No. 362,366. (No model.)

To all whom it may concern:

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

My invention relates to the construction and arrangement of a gate whereby cattle-cars are divided into stalls or compartments when being used for the purpose of transporting cattle, which gate is arranged to be moved to a position just beneath the carlings when the car is to be used for the purpose of transporting freight; and my present invention consists of a novel arrangement of grooves or ways for the gates, as hereinafter more fully explained, and specifically pointed out in the claims.

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

Figure 1 is a cross-sectional elevation of a car embodying my improvements. Fig. 2 is a central longitudinal section of a portion thereof; and Fig. 3 is a view of a modified arrangement, to be hereinafter specially referred to.

Referring now to the general construction as illustrated in the drawings above referred to, A A represent the sills; B B, the posts; C C, the plates; D D, the carlings, and E the flooring of the car. The gate proper, which is shown at F, consists, in the form illustrated, of a series of bars *a a'*, united by metallic strips *b b*, which are bolted to the faces of the bars, as clearly shown in Fig. 1, and, if desired, the bars may be still further strengthened and stiffened by diagonal brace-bars *c c*, one of such bars being placed on either face of the gate and both bars being bolted in position. The upper and lower bars *a'* of the gate F are somewhat longer than the central ones, and each end of the upper bar is provided with a bracket *d*, which carries rollers *e*, while similar brackets *d'* are fixed to either end of the lower bar and provided with projecting lugs *f*, which are considerably smaller in diameter than the rollers *e*.

The gate constructed as described is mounted in grooves or ways formed in any suitable manner, as by strips *g g*, fixed to the inner faces of the posts B, and by other strips *h h*, fixed to the plates and to facing-strips G, the two sets of strips *g g* and *h h* being connected by diagonally-mounted strips *i i*, so that a continuous way is formed from the floor of the car up along the post and upon the inner face of the plates. The upper portion of this groove or way in which the roller *e* of the gate rests is considerably larger than the lower portion in which the lugs or projections *f* ride, the strips *g* being preferably formed with a seat *k*, upon which the rollers *e* rest, thus supporting the weight of the gate from the upper bar when said gate is in a vertical position.

The main grooves or ways, which are designated by the letter *m*, it will be observed, are arranged so that the horizontal or inclined portion of each overlaps the preceding one, as clearly shown in Figs. 2 and 3.

Branching out from each main groove or way *m* is an auxiliary groove or way *n*, the width of which does not exceed the width of the lower portion of the way *m*, from which construction it will be seen that it will be impossible for the rollers *e* to enter the ways *n*.

The gates constructed as described are operated by endless chains P P, which run over sheaves *p*, mounted in brackets *p'*, that are fixed to the facing-strips G, a proper motion being imparted to the chains by chain-wheels *q*, over which the chains P pass, said chain-wheels *q* being carried by a shaft K, which is mounted in bearings in the sills A and projects through such sills on either side of the car, the ends of the shaft being formed to engage with the socket of a crank-handle and the position of the shaft being controlled by means of a pawl and ratchet *j l*, the connection between the chain and the gate being made by means of the brackets *o o*, which project from the lower bar of the gate.

Such being the general construction and arrangement of the gate, it will be readily understood from an inspection of Fig. 2 that when the chain P is moved in the direction of the arrows shown in connection therewith the gate F will be raised and that its rollers *e* will be compelled to follow the direction of the way *m*; but that when the lugs or projections *f* arrive opposite the auxiliary ways *n* a continued movement of the chains will draw such projections up within the auxiliary

ways, so that the lower edge of the gate will be drawn up close beneath the roof of the car.

In Fig. 3 I illustrate a modified construction wherein the auxiliary groove or way n' does not enter the main groove m', but runs down a short distance parallel with the vertical portion of said groove, and is then brought in beneath the seat k' of the roller and continued to the bottom of the car; but this arrangement accomplishes substantially the same result as the other, and its operation is too apparent to need any detailed explanation at this point.

The gate shown forms no part of the present invention, the same being claimed in my application filed August 24, 1885, Serial No. 175,221. The present invention relates to the overlapping main grooves or runs and the auxiliary runs.

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

1. The combination, with a cattle-car provided with main and auxiliary ways or runs, of flexible partitions movable in said ways, the main ways forming guides for the main portion of the partitions and the auxiliary ways forming guides for receiving the lower ends of said partitions, substantially as described.

2. The combination, with a cattle-car provided with main overlapping ways or runs and auxiliary ways or runs, of flexible partitions movable in said ways, the main ways forming guides for the main portion of said partitions and the auxiliary ways forming guides for receiving the lower ends of the partitions, substantially as described.

3. In a cattle-car, the combination, with a flexible gate F, of a chain P, connected to the lower bar of said gate, and ways m and n, the way m forming guides for the main portion of said gate and the way n forming a guide for the lower end of said gate, substantially as described.

4. In a cattle-car, the combination, with a gate provided with rollers e e and projections $f f$, of chains P and grooves or ways m n, provided with a seat k, substantially as described.

FERDINAND EUGENE CANDA.

Witnesses:
E. M. CLARK,
C. SEDGWICK.