

(No Model.)

2 Sheets—Sheet 1.

B. C. HICKS.
STOCK CAR.

No. 455,714.

Patented July 7, 1891.

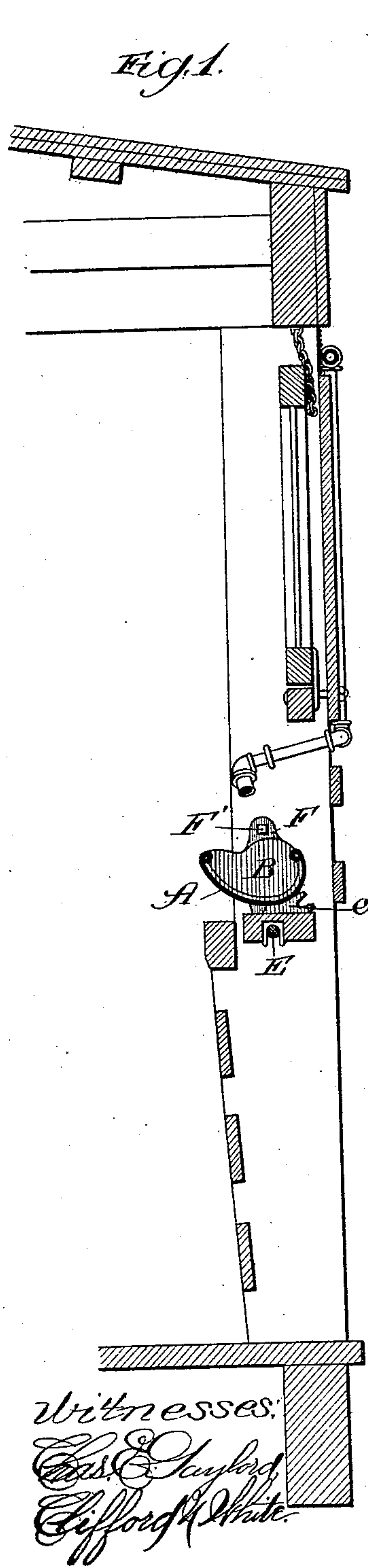
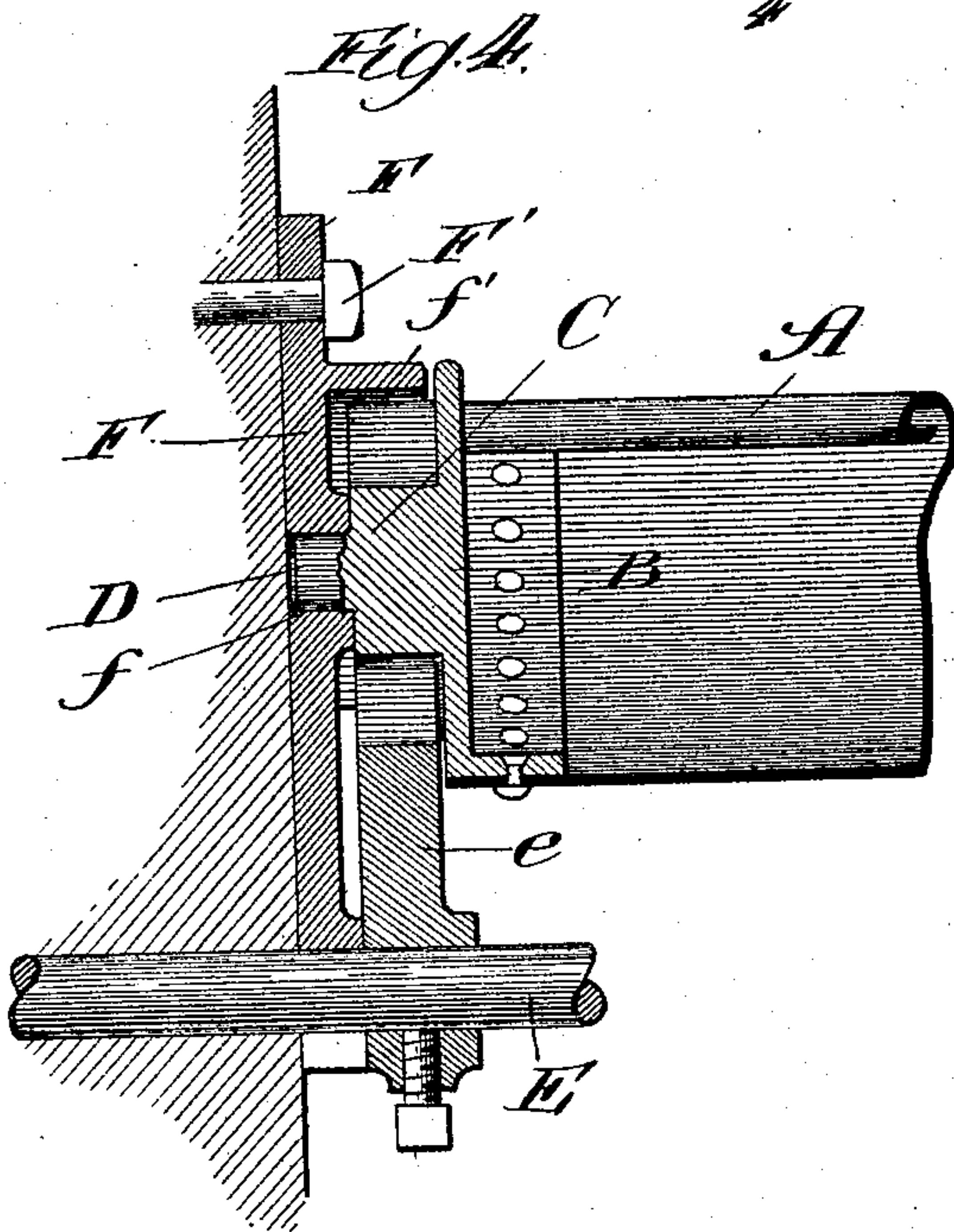
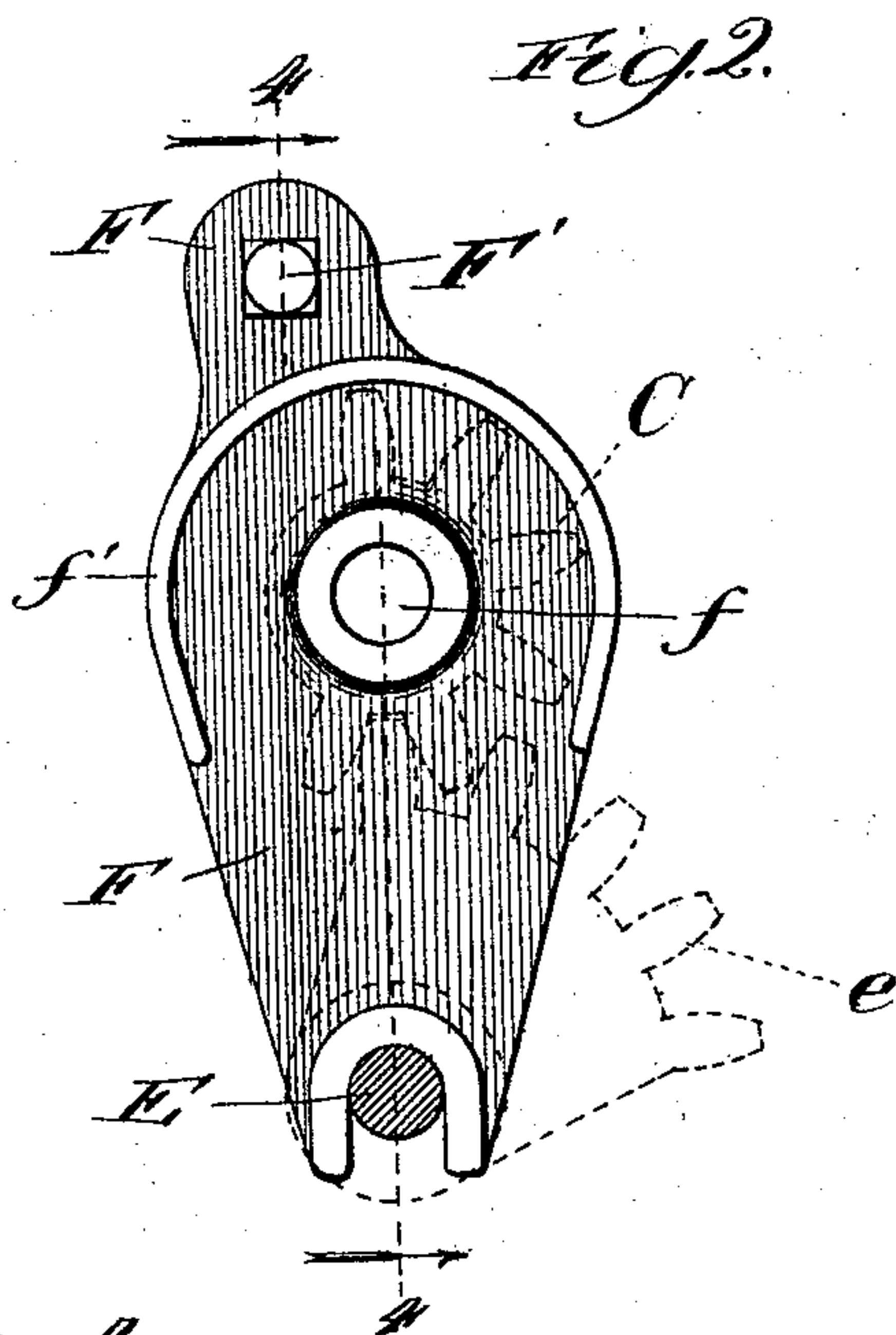
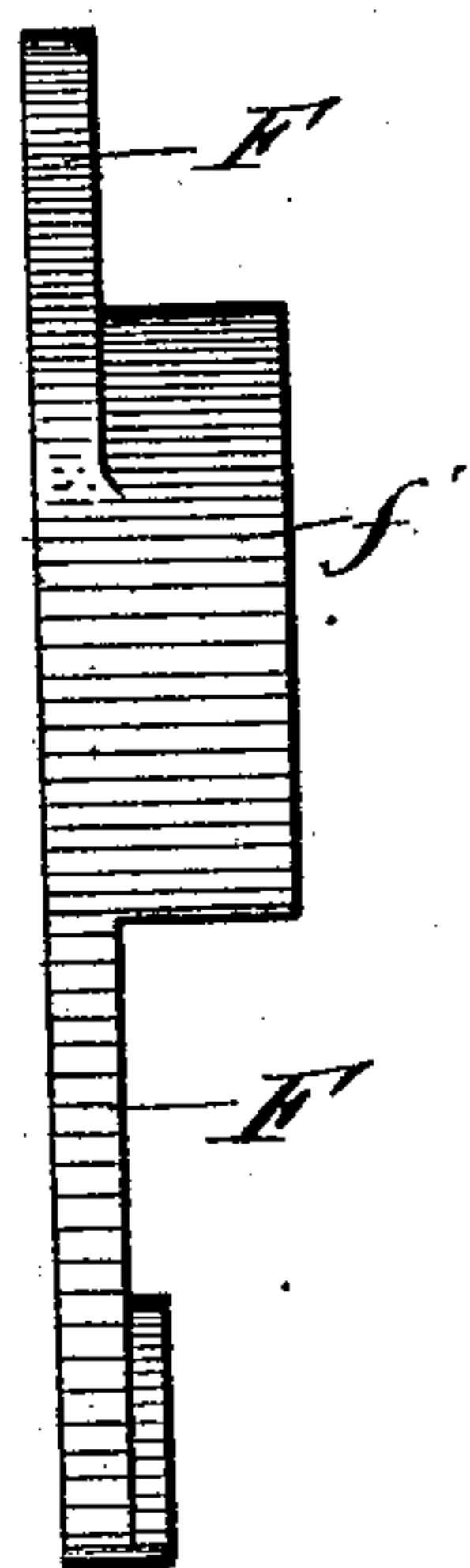


Fig. 3.



Inventor:

Bohn C. Hicks,

By Banning & Banning Payson
Attys.

(No Model.)

2 Sheets—Sheet 2.

B. C. HICKS.
STOCK CAR.

No. 455,714.

Patented July 7, 1891.

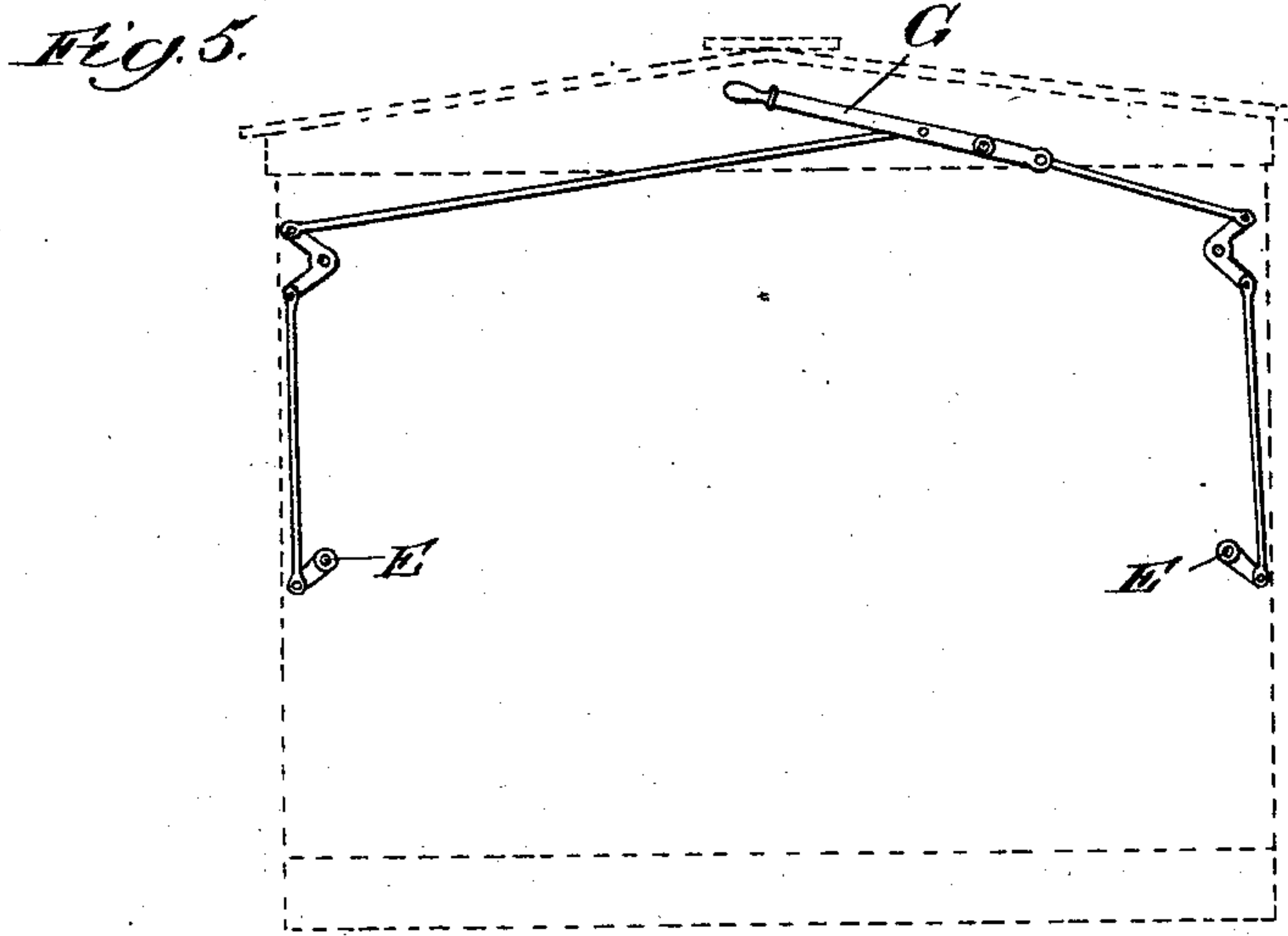


Fig. 6.

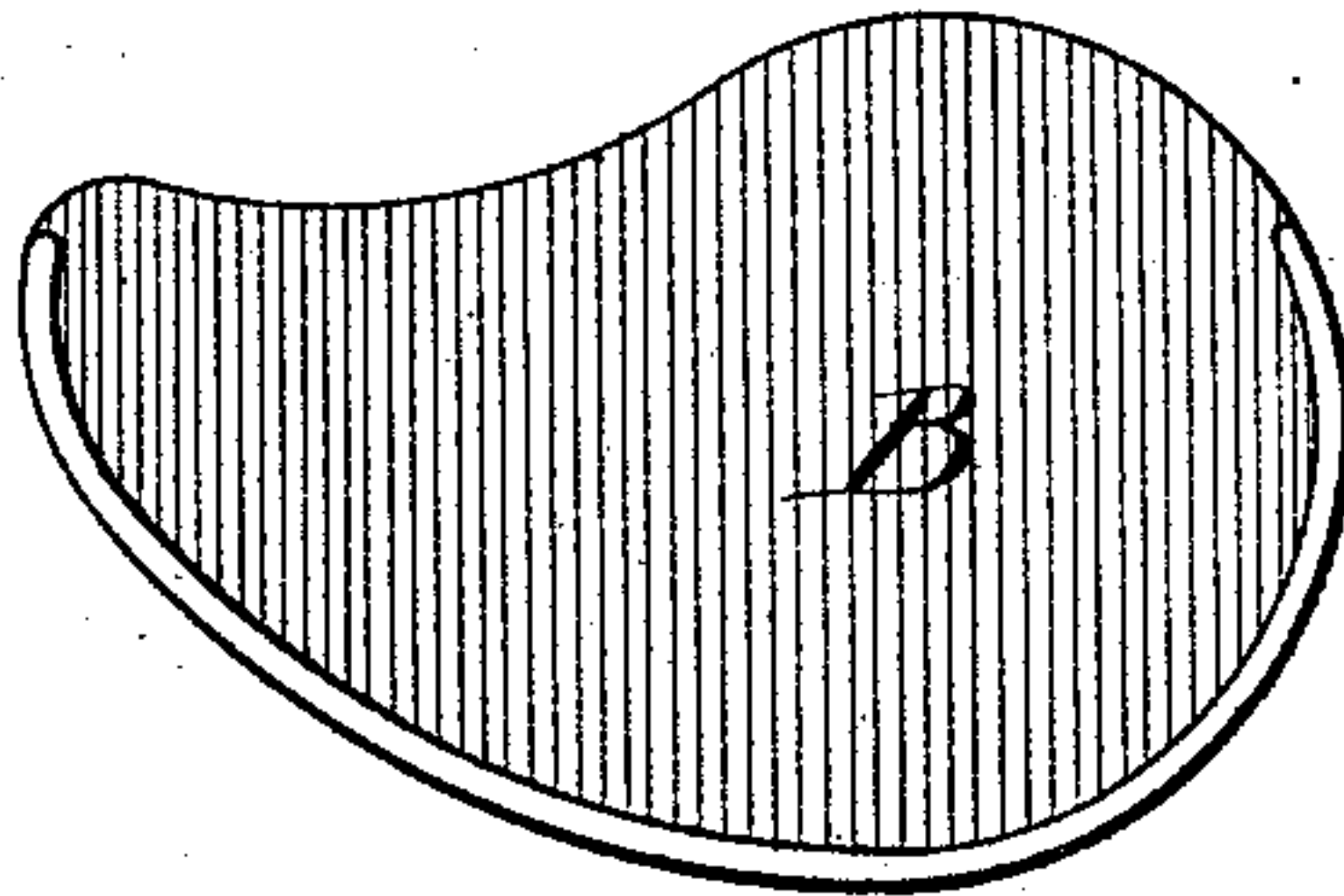
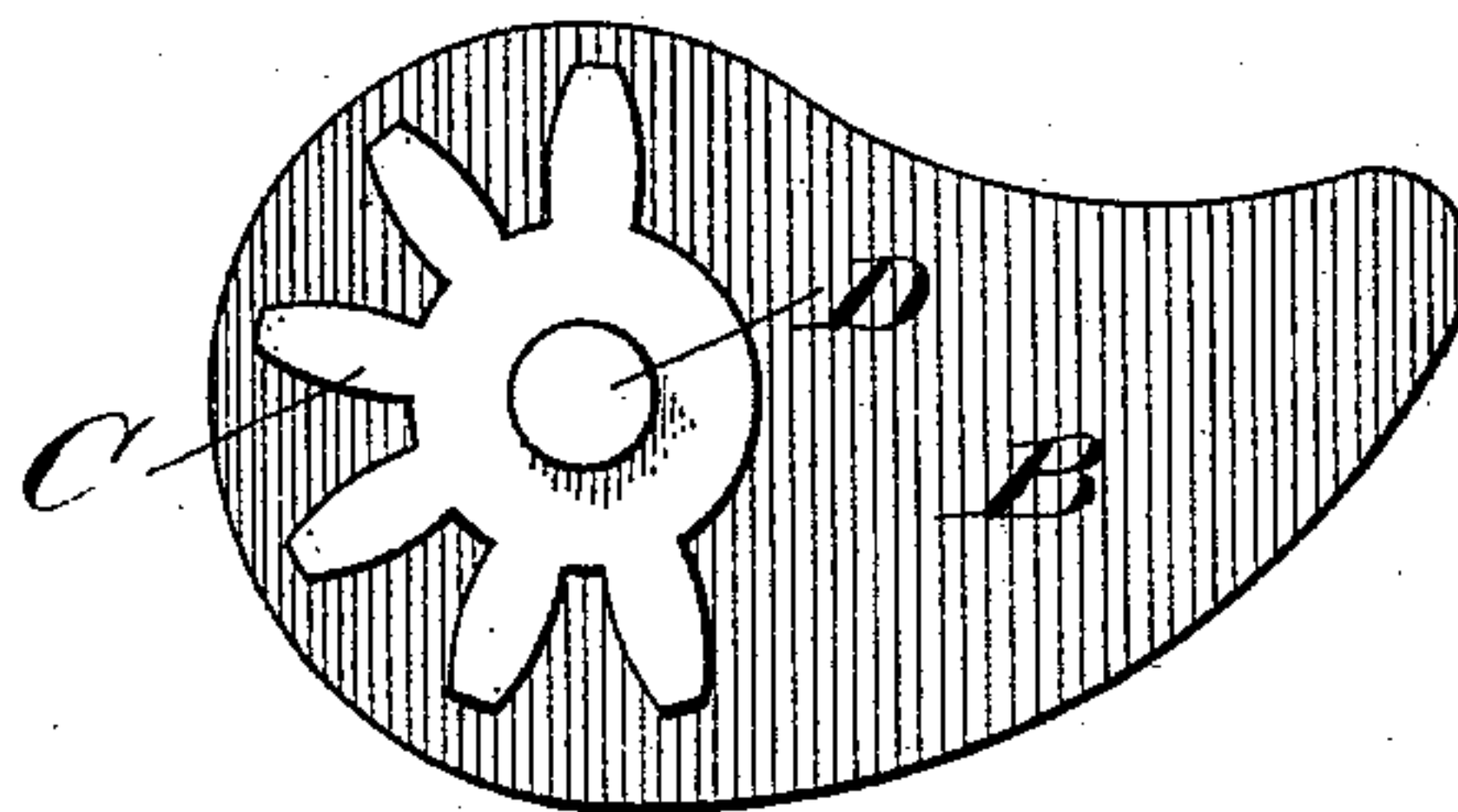


Fig. 7.



Witnesses:
Chas. C. Gaylord.
Clifford N. White.

Inventor:
Born C. Hicks.
By Banning & Banning & Payson,
Attys.

UNITED STATES PATENT OFFICE.

BOHN CHAPIN HICKS, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE HICKS STOCK CAR COMPANY, OF WEST VIRGINIA.

STOCK-CAR.

SPECIFICATION forming part of Letters Patent No. 455,714, dated July 7, 1891.

Application filed December 15, 1890. Serial No. 374,727. (No model.)

To all whom it may concern:

Be it known that I, BOHN CHAPIN HICKS, a citizen of the United States, residing at Chicago, Cook county, Illinois, have invented certain new and useful Improvements in Stock-Cars, of which the following is a specification.

This invention relates more particularly to the construction and operation of the watering-troughs used in stock-cars, and is intended to simplify and improve such construction; and it consists in the features and details of construction hereinafter described and claimed.

In the drawings, Figure 1 is a vertical section of one side of the car with trough in position for use; Fig. 2, a face view of the guard and supporting-plate with gears indicated by dotted lines; Fig. 3, a side elevation thereof; Fig. 4, a sectional view of plate and portion of the trough, taken on a line corresponding to line 4 of Fig. 2, looking in the direction of the arrows; Fig. 5, an elevation of the end of the car in dotted lines, showing the lever and connection with the shafts; Fig. 6, an inside view of the end of the trough, and Fig. 7 an outside view thereof.

The troughs are pivotally supported, as shown, between the side posts of the car. Each of them is composed of a body A, preferably made in semi-cylindrical form out of sheet metal, and end pieces B, preferably made of cast-iron. These ends are each provided with a segmental gear C and a trunnion D, preferably cast integral with the end, although, if preferred, the gears and trunnions may be made separate from and attached to the ends in any suitable manner. The end pieces are fastened to the body by means of rivets or screws, as desired. Shafts E are supported in journals at each side of the car and preferably beneath the troughs, there being two shafts at each side extending from the respective ends of the car to the doors in the sides thereof. Segmental gears *e* are secured to these shafts at proper distances to mesh, as shown, with the gears upon the trough ends. I then make the combined guard and supporting-plates F preferably of the form shown in Fig. 2. These plates are provided with sockets *f* to receive the trunnions and a flange

f', which covers the gears, &c., and prevents them from being clogged by filth and refuse, snow, &c., thereby insuring the perfect working of the device at all times. These plates are fastened to the side posts by means of bolts *F'*, as shown, and at their lower ends are provided with slots or recesses adapted to embrace the shafts, facilitating the placing of the troughs and plates in proper position, preventing the latter from moving sidewise and regulating the adjustment of the gears. The sockets *f* are passed over the trunnions and the trough and its plates inserted between a pair of side posts, the slots in the plates being passed over the shaft. The plates are then bolted to the posts and the trough thereby fastened in place. If it be desired to remove one of the troughs, it will be merely necessary to take out the bolts that fasten the plates to the posts, after which the plates and trough can be lifted out without disturbing the operating-shaft or any of the troughs, each being independent of all the others. As will be readily seen, this putting the troughs in place or removing them is a very simple operation, which does not require special skill of any sort, and this simplification of the manner of attaching the troughs is an important and valuable feature of my invention.

The operating-shafts extend beyond the ends of the car and are connected to levers G, one or more of which levers are placed at each end of the car. When the shafts are revolved by means of this lever, they act through the gears C and *e* to rock the troughs in one direction or the other, according as it is desired to turn them down into position for use or up into a position of non-use.

By this improved construction I am enabled to make the trough in the fewest number of parts possible, greatly simplifying and cheapening it, while in no way interfering with its perfect and easy operation. Owing to the form of the guard-plates, it is impossible for the gears to become clogged in any way, so that the device is certain to act at all times.

I claim—

1. The side posts of a stock-car and a trough pivotally supported therebetween, said trough consisting of a sheet-metal body A and two

cast-metal ends or heads B, each of said heads being formed with an integral trunnion D and one at least of said heads being formed with an integral gear C, in combination with
5 a rotatable shaft E parallel with the axis of the trough and having a gear *e* meshing with said gear C, and guard-plates F F, each bolted at one end to the face of one of said side posts and each having at its opposite end a
10 slot or recess which fits over the said shaft E, each guard-plate having a socket *f*, constituting the bearing for one of said trunnions D, and one at least of said guide-plates having a flange *f'*, which covers and protects said
15 gears, substantially as set forth.

2. Adjacent side posts of a stock-car, a rotatable shaft extending horizontally along the

side of the car, and a gear on said shaft, in combination with two guide-plates, one carried by each of said side posts, each guide-plate being bolted at one end to its side post and having at its opposite end a slot or recess which fits over said shaft, and each guide-plate having a socket, and a trough having at opposite ends trunnions which fit
25 and turn in the sockets in said guide-plates, said trough having a gear which meshes with the gear on said shaft, substantially as set forth.

BOHN CHAPIN HICKS.

Witnesses:

THOMAS A. BANNING,
ANNIE C. COURTENAY.