

(No Model.)

A. O. CLEMONS, 2d. & R. N. CLEMONS.  
FIFTH WHEEL FOR VEHICLES.

No. 409,733.

Patented Aug. 27, 1889.

Fig. 1.

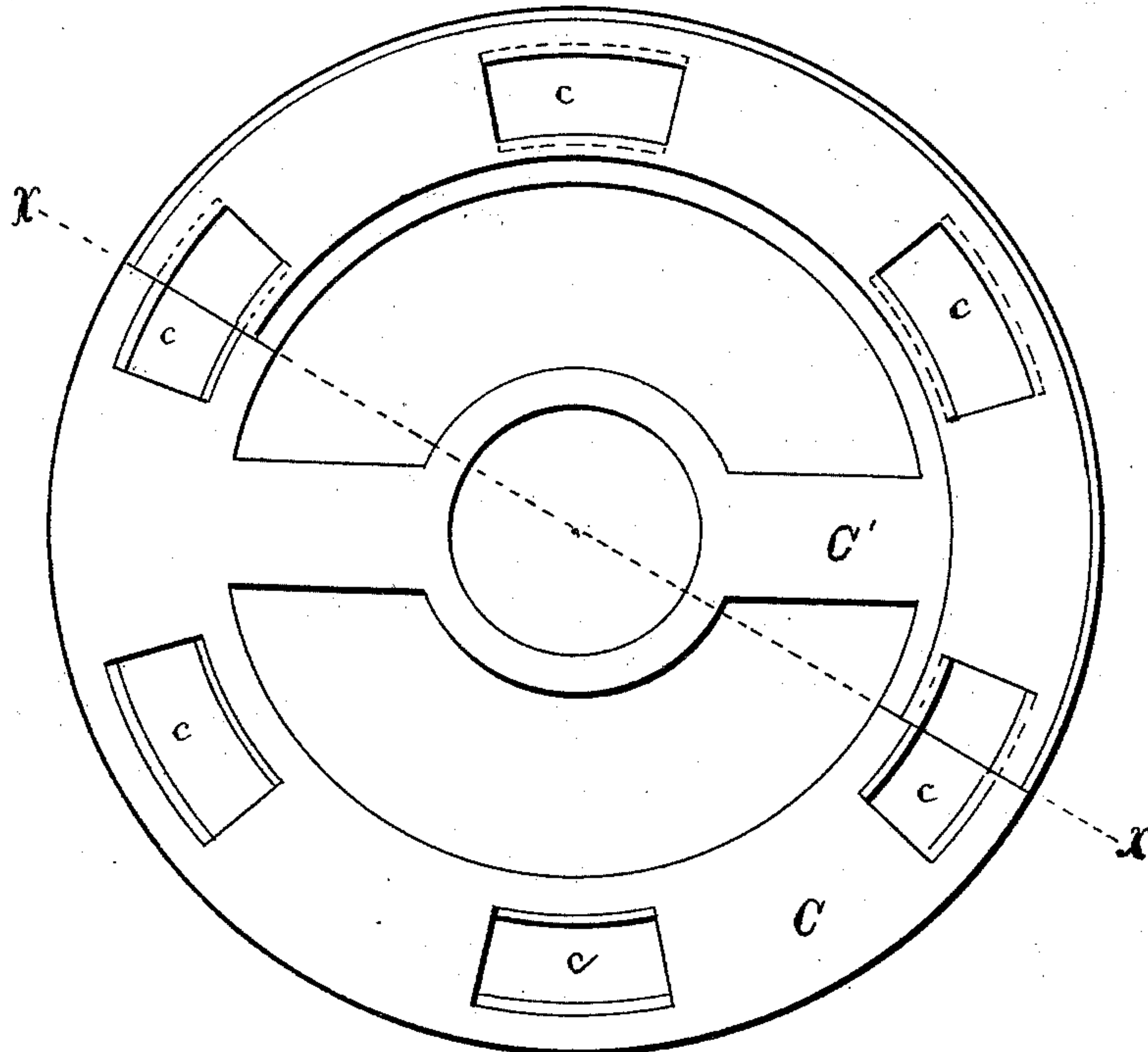


Fig. 2.

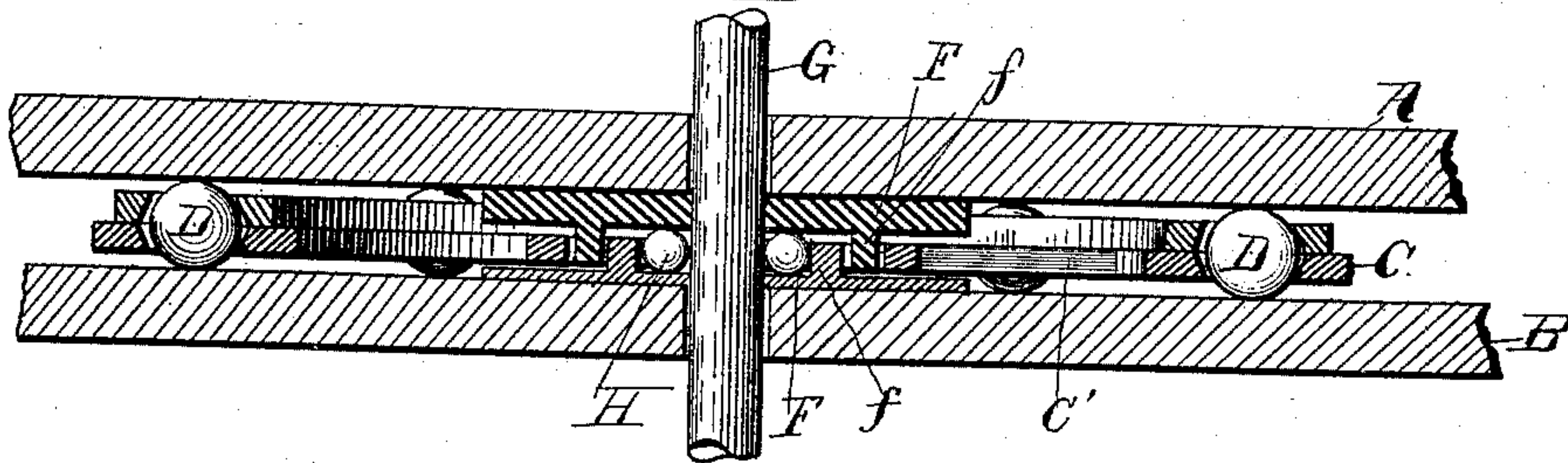


Fig. 3.

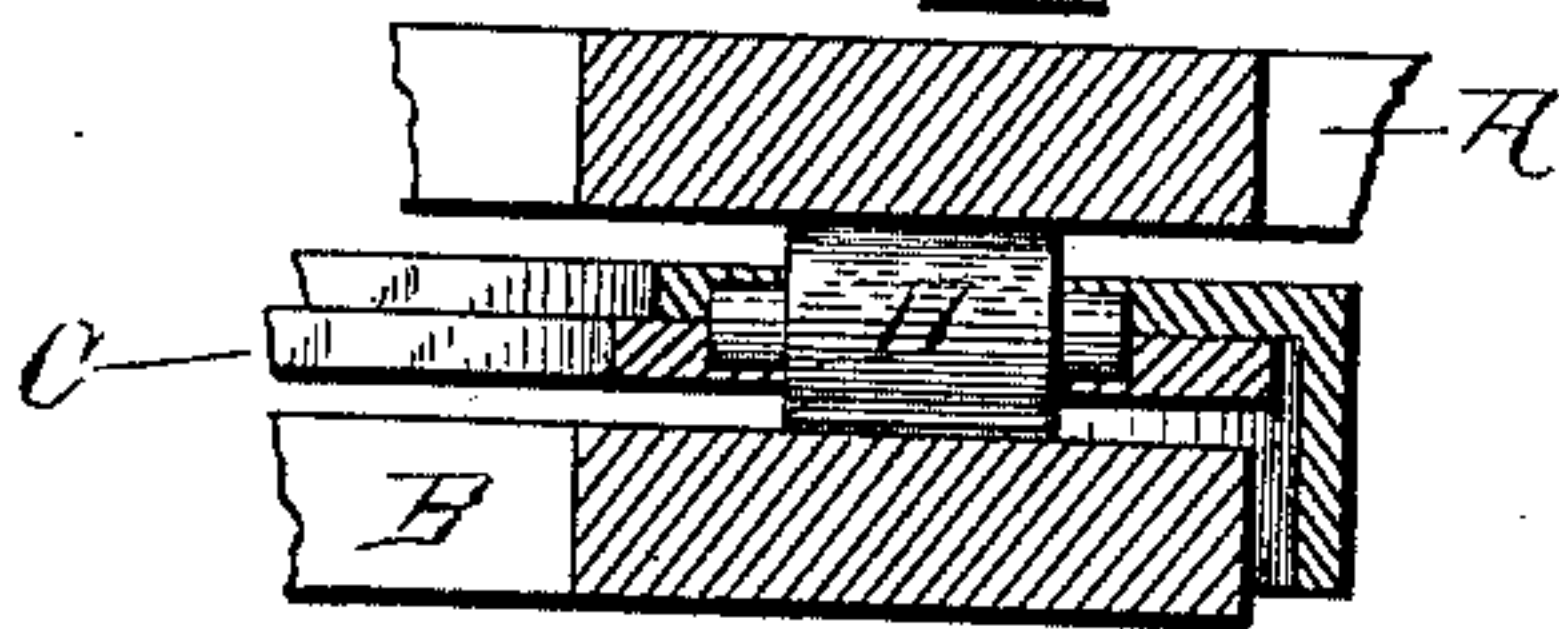
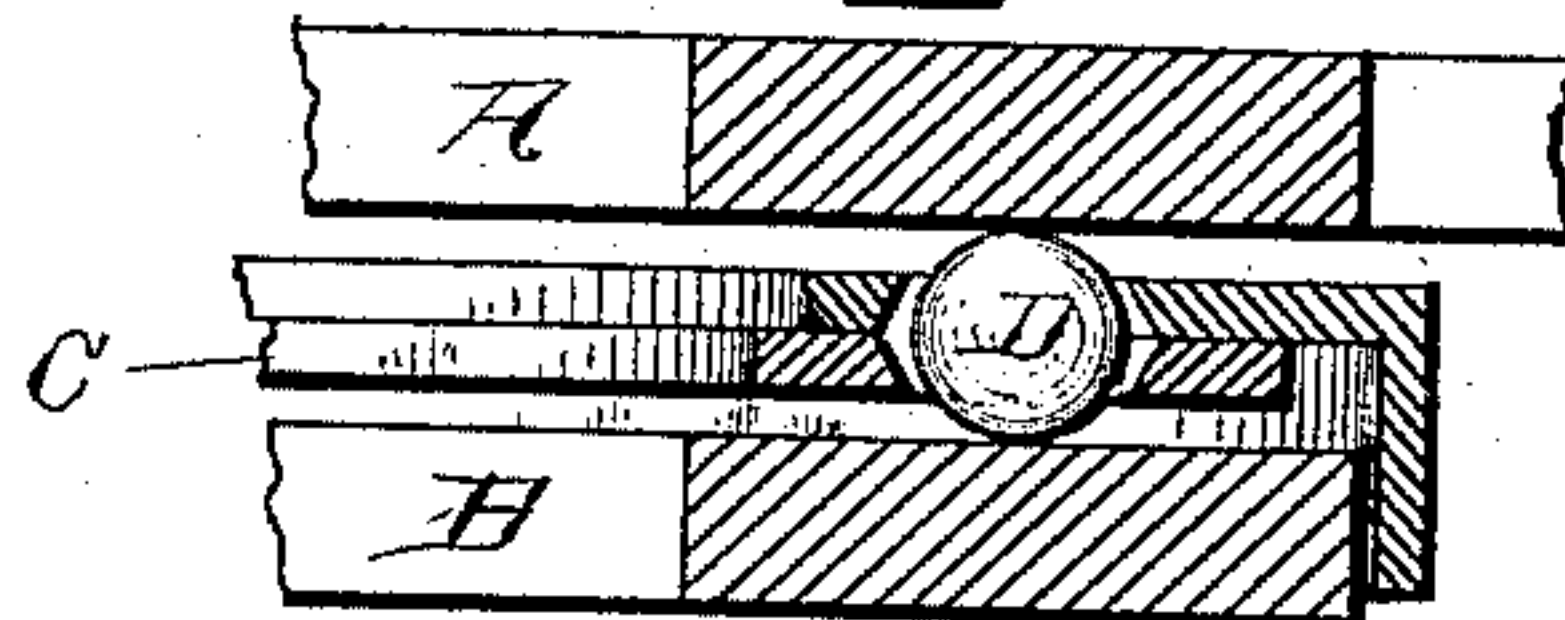


Fig. 4.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## FIFTH-WHEEL FOR VEHICLES.

SPECIFICATION forming part of Letters Patent No. 409,733, dated August 27, 1889.

Application filed June 3, 1889. Serial No. 312,998. (No model.)

*To all whom it may concern:*

Be it known that we, ABRAM O. CLEMONS and ROBERT N. CLEMONS, 2d, citizens of the United States, residing at Dresden, in the county of Washington and State of New York, have invented certain new and useful Improvements in Fifth - Wheels for Vehicles; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

Our invention relates to an improvement in fifth-wheels for vehicles; and it consists in the construction and arrangement of parts hereinafter described and claimed.

The object of our invention is to provide an anti-friction bearing for fifth-wheels, which will be simple in its construction, readily applied, and effective in its operation. We attain these objects by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate corresponding parts in the several views, and in which—

Figure 1 is a plan view of the roller-bearing plate with part of the retaining-cap removed. Fig. 2 is a section on the line  $x x$  of Fig. 1. Figs. 3 and 4 are detail views of modified forms.

In the drawings, A represents the upper circle, and B the lower circle, attached, respectively, to the cross-piece and spring-frame of the wagon-box. Between these circles is interposed a metallic plate C, circular in form, having at intervals openings  $c$  with inclined walls, and a cross-piece  $C'$ , with a circular opening  $d$ , formed at its enlarged center. Within the openings  $c$  we place balls D, which project beyond the outer face of the plate C, the diameter of the balls being greater than the width of the under sides of the openings, while the upper sides are wider than the balls.

To retain the balls in place, we place a metal cap E, having openings  $e$  therein registering

with the other openings and formed with oppositely-inclined walls, to prevent the balls from becoming displaced, but permitting them to rotate easily.

F F' are castings attached to the upper and lower circles, respectively, the former having a downwardly-extending circular flange  $f$  on its under face, while the latter has an upwardly-extending circular flange  $f'$ , fitting within the other flange. An opening is made in these castings, through which the king-bolt  $G'$  passes. In the space between the king-bolt and inner flange is placed a series of balls H, upon which the upper casting rests. The outer flange fits closely in the opening in the cross-piece  $C'$ , and thus holds the several parts in place.

In Fig. 3 we have shown a modified form, wherein rollers are used instead of balls. In Figs. 4 and 3 we have shown a form of upper plate or cap E, it having a downwardly-extending flange  $e'$  on its edge, which prevents the parts from becoming separated and dispenses with the central castings.

It will be seen by the above construction that a simple and durable anti-friction wheel is produced. We are aware that many minor changes in construction and arrangement of the parts of our device can be made and substituted for those shown and described without in the least departing from the nature and principle of our invention.

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

1. The combination, with the upper and lower circles of a fifth-wheel, of a circular plate interposed between the same and having openings with inclined walls therein, a removable cap-plate having openings registering with said other openings and formed with oppositely-inclined walls, balls in the openings, and a cross-piece, substantially as described.

2. The combination, with the upper and lower circles of a fifth-wheel, of an interposed circular plate having a cross-piece with an enlarged opening at its center, balls secured in the plate, castings arranged on the circles having lateral flanges of different dimensions ex-

tending through the opening in the cross-piece, a king-bolt G', and a series of balls between the castings, substantially as described.

3. The combination, with the upper and  
5 lower circles, of the plate C, interposed between the same and formed with openings c, the cap E, having openings therein, the flanged castings F F', secured, respectively, to the upper and lower circles, and the balls D and  
10 H, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

ABRAM O. CLEMONS.  
ROBERT N. CLEMONS, 2D.

Witnesses:

GARDNER BELDEN,  
HARLAN BELDEN.