

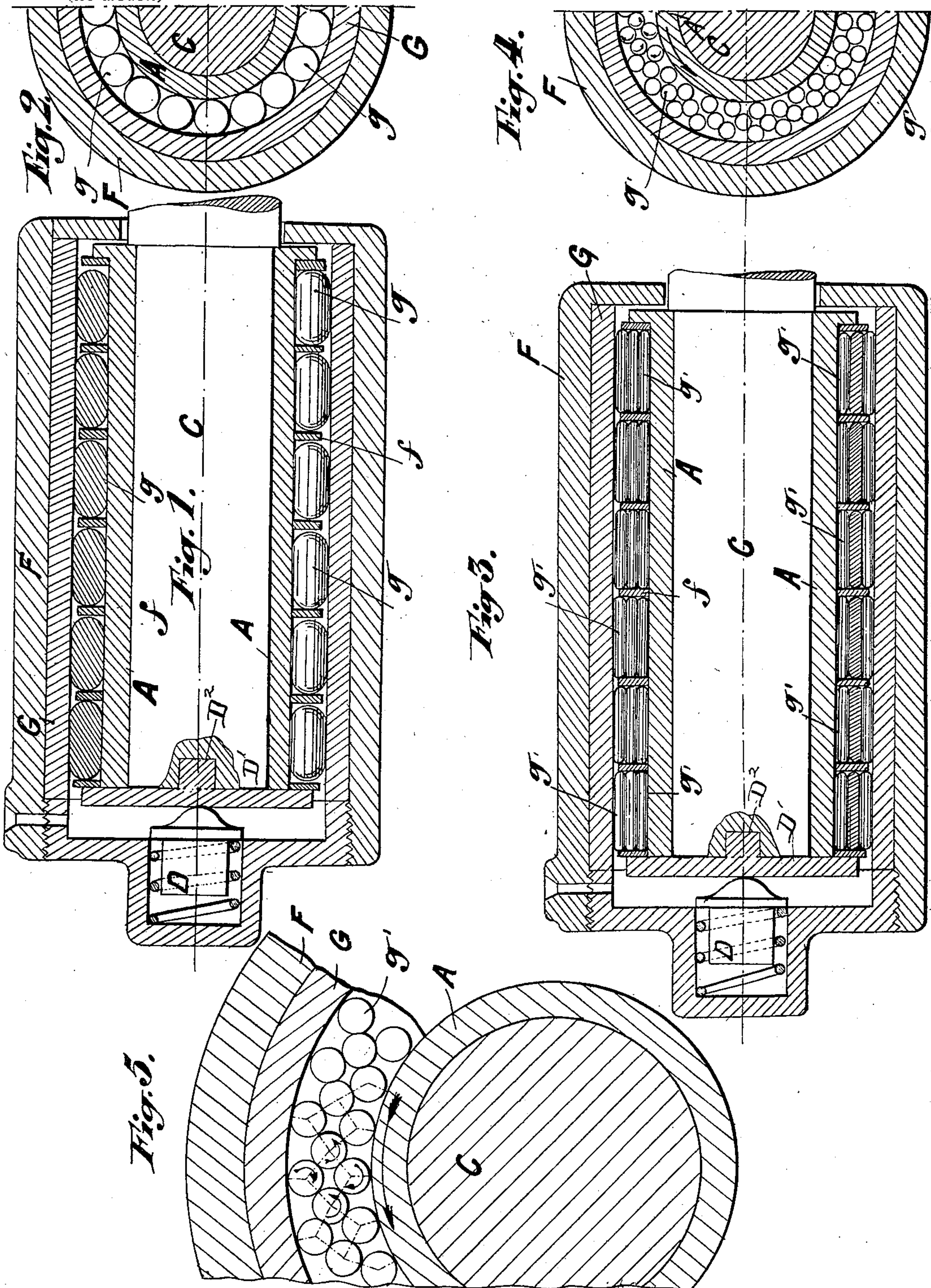
No. 639,720.

Patented Dec. 26, 1899.

M. FOIDART.
ROLLER BEARING.

(Application filed Mar. 28, 1899.)

(No Model.)



WITNESSES

George M. Richards
C. D. Davis

INVENTOR

Mathieu Foidart
by *W. H. Babcock*
Attorney

UNITED STATES PATENT OFFICE.

MATHIEU FOIDART, OF BRUSSELS, BELGIUM.

ROLLER-BEARING.

SPECIFICATION forming part of Letters Patent No. 639,720, dated December 26, 1899.

Application filed March 28, 1899. Serial No. 710,778. (No model.)

To all whom it may concern:

Be it known that I, MATHIEU FOIDART, a citizen of the Kingdom of Belgium, residing at Brussels, Belgium, have invented certain
5 new and useful Improvements in Roller-Bearings, of which the following is a specification.

My present invention relates to improvements in ball-bearings, the object being to provide a device of this kind in which means
10 are employed for avoiding the objectionable features found in ordinary roller-bearings for heavy vehicles, such as tram-cars or the like; and it consists in the construction, combination, and arrangement of parts fully described
15 and claimed hereinafter.

In order that the invention may be the more readily understood and carried into practical effect, reference is hereby made to the accompanying drawings, illustrating my invention
20 in several views.

Figure 1 is a longitudinal sectional view of a roller-bearing constructed in accordance with my invention. Fig. 2 shows a cross-section of same. Fig. 3 is a longitudinal sectional view of a modified construction. Fig.
25 4 shows a cross-section of same, and Fig. 5 is an enlarged cross-section of same.

In the drawings like letters refer to like parts throughout all the figures.

Referring to Fig. 1, the usual spherical balls are here replaced by elongated rollers *g*, having cylindrical contact-surfaces. In other words, I provide small rollers to be employed as a substitute for usual antifriction-balls.
35 In order to provide sliding friction of said rollers, due to their larger contact-surfaces and to certain abnormal conditions of movement and load, said rollers are preferably employed in series of rollers *g'*, (three series *f* *i*;)
40 the upper and lower series of which are rotated in one direction, the intermediate series of rollers being rotated in reversed direction, as shown in Figs. 3, 4, and 5. This arrangement allows of properly and uniformly distributing the strain on the bearing, which in
45 this case may be as readily regulated as any other construction.

The journal-boxes shown in the accompanying drawings are composed of inner and
50 outer bearing-sleeves, the inner sleeve A being mounted on journal C, while the outer sleeve G is mounted in the journal-box proper, F. The different rows of rollers *g* or *g'* are

separated by movable rings *f*, and all the rows are held in proper relation by means of a plate
55 D', having a central boss D² extending into a corresponding recess in journal C, said plate D' being yieldingly held in place by means of a spring-bolt D, arranged in a suitable recess provided in the end plate of the journal-box F. 60

Changes may be made in the minor details of construction without departing from the scope and spirit and sacrificing any of the advantages of the invention.

Having fully described my invention, what
65 I claim, and desire to secure by Letters Patent, is—

1. In combination with axle-journal C and axle-box F, the sleeve A on the said journal, the sleeve G fast to the inside of the said box, a
70 layer of rows of elongated, round-ended rollers having their lesser diameter equal to the interval between the said sleeves, a series of partition-rings *f* alternating with the said rollers so that there is a partition-plate in contact with each rounded end of each roller, an
75 end plate D' which has on its inner face a central lug D² fitting into a recess in the end of the said journal and a spring-pressed block D bearing against the outer face of the
80 said end plate to hold the entire series of alternating plates and rollers in place, substantially as set forth.

2. In combination with the axle-journal C and axle-box F, the sleeve A on the said jour-
85 nal, the sleeve G fast to the inside of the said box, a series of annular layers of elongated, round-ended rollers arranged alternately and collectively filling the interval between the
90 said sleeves, a series of partition-rings *f* alternating with the said rollers so that there is a partition-plate in contact with each rounded end of each roller, an end plate D' which has on its inner face a central lug D² fitting into
95 a recess in the end of the said journal and a spring-pressed block D bearing against the outer face of the said end plate to hold the entire series of alternating plates and rollers in place, substantially as set forth.

In testimony whereof I affix my signature
100 in presence of two witnesses.

MATHIEU FOIDART.

Witnesses:

LD. STURM,
GREGORY PHELAN.