(No Model.) 2 Sheets—Sheet 1.

T. R. FERRALL.

ANTI FRICTIONAL BEARING.

No. 258,042. Patented May 16, 1882.

Fig. 1.

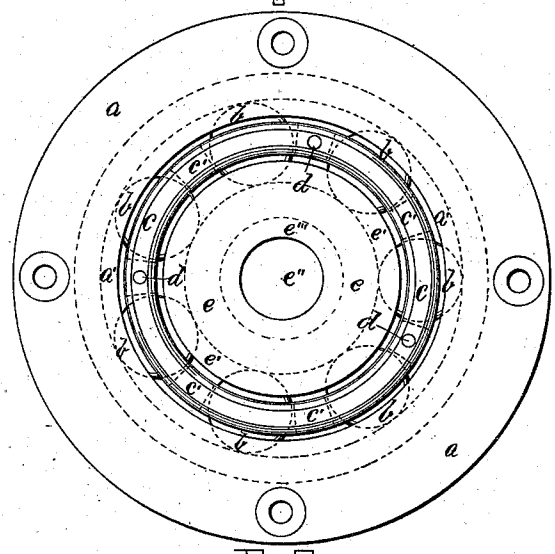


Fig. 2.

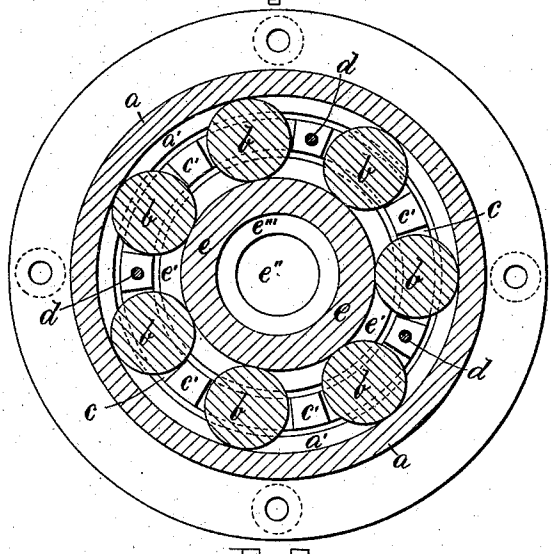
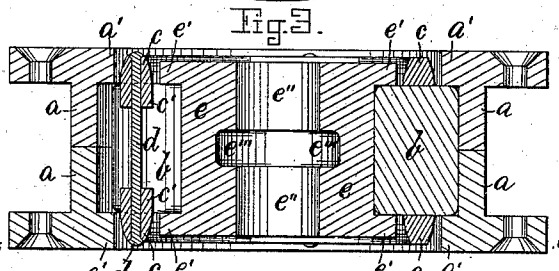


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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Fig 4.

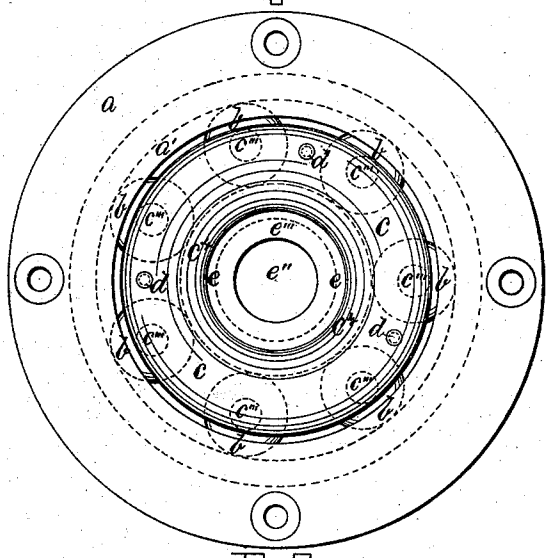


Fig 5.

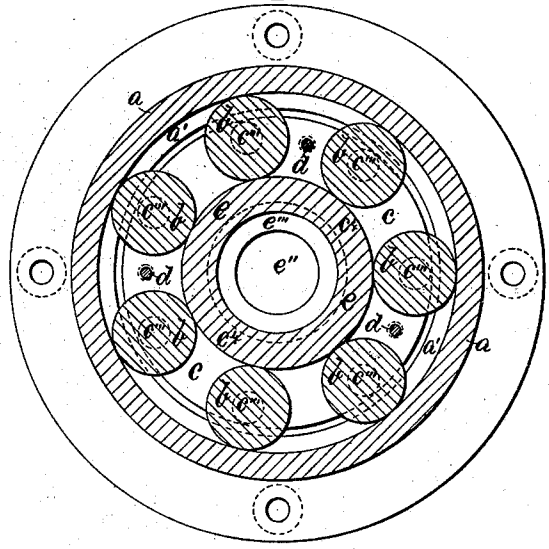
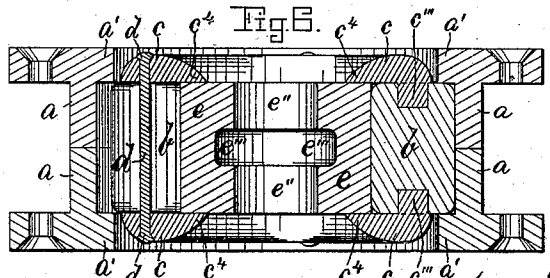


Fig 6.



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UNITED STATES PATENT OFFICE.

THOMAS R. FERRALL, OF BOSTON, MASSACHUSETTS.

ANTI-FRICTIONAL BEARING.

SPECIFICATION forming part of Letters Patent No. 258,042, dated May 16, 1882.

Application filed March 15, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS R. FERRALL, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Anti-Frictional Bearings; and I do hereby declare that the same are fully described in the following specification and illustrated in the accompanying drawings.

This invention relates to improvements in anti-frictional bearings; and it is carried out as follows, reference being had to the accompanying drawings, on which—

Figure 1 represents a side elevation of the improved anti-frictional bearing. Fig. 2 represents a vertical section, and Fig. 3 represents a cross-section, of the same. Fig. 4 represents a side elevation of a modification of the invention. Fig. 5 represents a vertical section, and Fig. 6 represents a cross-section, of the said modification.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

a a represent the case or shells within which the anti-frictional rollers *b b b* are located, each such case or shell being provided with an inwardly-projecting annular flange, *a'*, to prevent a longitudinal motion of the rollers *b b b* within said case *a a*.

c c are the regulators, one at each end of the rollers *b b b*, which regulators are provided with inwardly-projecting dividers *c' c'*, (shown in Fig. 2,) one between each pair of successive rollers *b b*, which projections serve to keep the rollers *b b* at a proper distance apart, and to prevent their coming in contact with each other.

d d are rivets uniting the two regulators *c c*, and serve to hold them together at a proper distance apart, according to the length of the rollers *b b*, as shown in Figs. 1, 2, and 3.

e is the central bearing-sleeve, with outwardly-projecting annular flanges *e' e'* in its extreme ends, so as to prevent it from moving longitudinally, for which purpose said flanges *e' e'* pass by a portion of the ends of the rollers *b b*, as shown in Fig. 3.

e'' is the central cylindrical bored-out hole, for the reception of the spindle or axle for which the anti-frictional bearing is intended, such bored-out hole being preferably provided with annular groove or recess *e'''*, adapted to contain lubricating material.

Figs. 4, 5, and 6 show a modification of the invention, in which the dividers *c' c' c'* are dispensed with, instead of which the regulators *c c* are provided with cylindrical projections *c''' c'''*, fitting into corresponding cylindrical recesses in the ends of the rollers *b b*, as shown in Fig. 6. Another modification is the removal of the annular flanges *e' e'* of the central bearing-sleeve, *e*, which latter is made in the modification as cylindrical, (shown in Fig. 6,) and the regulators *c c* are each provided with an inwardly-projecting annular lip, c^4, which projects over each end of the central bearing-sleeve, *e*, as shown in Fig. 6, so as to prevent said bearing-sleeve from longitudinal motion in the direction of its axis.

This improved anti-frictional bearing is very simple in its construction. It is composed of very few parts, which are very easily put together in making the improved bearing, and permanently retained in working positions in a very practical and durable manner.

What I wish to secure by Letters Patent, and claim, is—

1. In an anti-friction bearing, the combination of the shells or cases *a*, having flanges *a'*, the revolving sleeve-bearing *e*, the series of rollers *b*, the regulators *c*, the connecting pins or rivets *d*, and the annular flanges *e'*, or their described equivalents, coacting with the parts specified to prevent the sleeve-bearing from moving longitudinally in the direction of the axis of the shaft, substantially as described.

2. The herein-described anti-frictional bearing, consisting of the case or shells *a a*, their annular flanges *a' a'*, the rollers *b b*, the regulators *c c*, with their rivets *d d d* and dividers *c' c'*, and the central bearing-sleeve, *e*, with its flanges *e' e'*, said flanges *e'* coacting with the parts specified to prevent the sleeve-bearing from moving longitudinally in the direction of the axis of the shaft, all constructed, arranged, and combined as and for the purpose set forth.

In testimony whereof I have affixed my signature in presence of two witnesses.

THOMAS R. FERRALL.

Witnesses:

ALBAN ANDRÉN,

HENRY CHADBOURN.