No. 885,354. PATENTED APR. 21, 1908.

A. J. LOGUIN.

GEARING.

APPLICATION FILED JUNE 21, 1907.

Fig. 1.

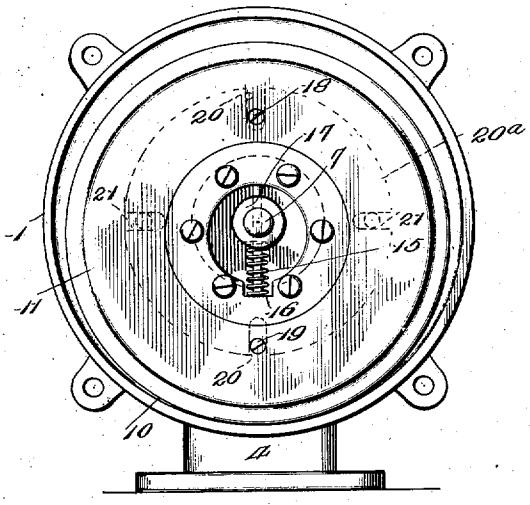



Fig. 2.

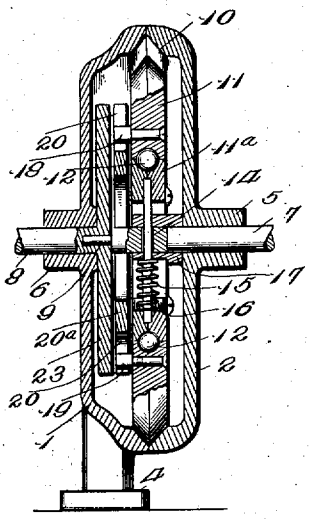



Fig. 4.

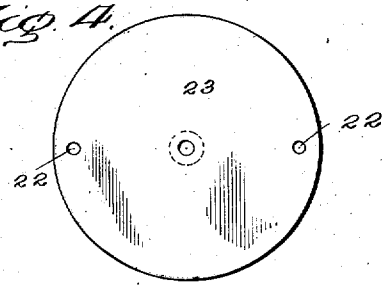



Fig. 3.

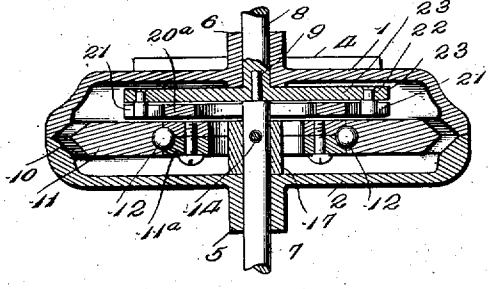
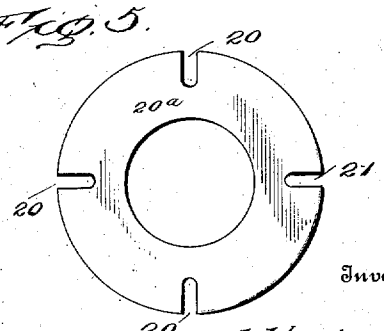



Fig. 5.




Inventor

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Witnesses

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# UNITED STATES PATENT OFFICE.

ALEXANDER J. LOGUIN, OF WILKINSBURG, PENNSYLVANIA.

## GEARING.

No. 885,354. Specification of Letters Patent. Patented April 21, 1908.

Application filed June 21, 1907. Serial No. 380,127.

*To all whom it may concern:*

Be it known that I, ALEXANDER J. LOGUIN, citizen of Russia, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Gearing, of which the following is a specification.

This invention has for its object mechanism for transmitting rotary motion from one shaft or part to another shaft or part in a novel and useful manner, and consists essentially in a peculiar construction, arrangement and combination of parts of a gearing which I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a side elevation of my improved gearing, one of the halves or sections of the casing being removed; Fig. 2 is a vertical central section of the gearing; Fig. 3 is a central horizontal section; Fig. 4 is a detail face view of one of the disks employed; and, Fig. 5 is a detail face view of the other disk.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

In the present embodiment of the invention, the same comprises a casing consisting of two halves or sections 1 and 2 provided with ears 3 by which they may be bolted together, one of said sections being provided with a pedestal 4 so that it may be secured in a stationary manner on a foundation or the like. The respective halves or sections 1 and 2 of the casing are provided with registering or alining shaft bearings 5 and 6 within which the shaft sections 7 and 8 are respectively mounted, one section being preferably provided with a reduced extremity 9 fitting in a socket in the other section, as clearly illustrated in the drawings.

In the present instance, for purposes of description, I will term the section 7 as the drive section, and the section 8 as the driven section, but it is to be understood that these terms are used merely as correlatives.

The casing is provided with a circular track 10 concentric with the shaft and preferably formed with beveled or V-shaped side walls, as shown. A wheel 11 is mounted to roll on the track 10, said wheel being circular, but of a diameter less than that of the track. The wheel is preferably provided with a tread portion corresponding in shape to the track so as to secure a proper rolling movement with a minimum of sidewise strain. The wheel 11 contains an eccentric $11^a$, and antifriction balls or similar devices 12 may be interposed between the eccentric ring $11^a$ and its wheel, if desired. A pin 13 extends diametrically into the eccentric ring $11^a$ and passes through a bore 14 in the shaft section 7. An expansion spring 15 encircles the pin 13 at one side of the shaft section 7 and has bearing at one end within a socket 16 formed in the eccentric ring $11^a$, and has bearing at its other end in a recess in the spacing roller 17 which encircles the shaft section 7 and through which the pin 13 also extends. The action of the spring 15 is to press the eccentric and the wheel 11 outwardly into engagement with the track 10 of the casing.

The wheel 11 is provided at two diametrically opposite points with laterally projecting studs 18 and 19 fitting within radial slots 20 that are formed at diametrically opposite points in a disk $20^a$. At two other diametrically opposite points equidistant from the radial slots 20, the said disk $20^a$ is provided with radial slots 21 in which the laterally projecting studs 22 fit. These studs project from and are secured to, and are formed on a disk 23 which may be formed integral with or secured in any manner to the shaft section 8.

In the practical operation of my improved coupling, as rotary motion is imparted to the shaft section 7, the eccentric ring $11^a$ will cause, through the instrumentality of the pin 13 and spring 15, the wheel 11 to roll along the track 10 in a direction opposite to the rotation of the shaft section 7. This motion of the wheel 10 will be imparted to the shaft section 8 through the instrumentality of the disks $20^a$ and 23, in an evident manner.

It is manifest that when the eccentric, after one turn of the shaft, comes again to its initial position, the said wheel 11 will touch the casing with another point than formerly touched it, the wheel 10 having turned around its axis at a certain angle. It is also evident that the shaft section 8 is rotated in an opposite direction and at a retarded speed.

While the accompanying drawing illus-

trates my improved gearing as arranged to operate on the friction principle, it is to be understood that the invention covers equally parts arranged in toothed relation as well as the parts in frictional engagement with each other.

Having thus described the invention, what is claimed as new is:

1. The combination of a casing provided with a stationary circular track, a wheel mounted to roll around said track and of less diameter than the same, an eccentric mounted within said wheel, a shaft journaled in said casing, a connection between said shaft and said eccentric, means for pressing the eccentric radially from the shaft whereby to press the wheel into engagement with the track, another shaft journaled in said casing in alinement with the first named shaft, and a radially movable connection between said last named shaft and said wheel.

2. The combination of a casing provided with a circular track, a wheel mounted to roll around said track and of less diameter than the same, an eccentric mounted in said wheel, a shaft having a radially yieldable connection with said eccentric and journaled in said casing, another shaft journaled in said casing, disks mounted within said casing, one of said disks being secured to the last named shaft, and a radially slidable connection between said wheel and the other disk and between the latter and the first named disk.

3. An apparatus of the character described, comprising a casing provided with a circular track, a wheel mounted to roll around said track and of less diameter than the same, a shaft journaled in said casing, an eccentric mounted within the said wheel and connected to said shaft to turn therewith, means for pressing the eccentric radially from the shaft against the wheel, a disk mounted in the casing and provided with diametrically opposite radial slots, pins secured to said wheel and working in said slots, the disk being provided with two other diametrically opposite slots, another disk mounted in the casing and provided with studs working in the last named radial slots, and another shaft journaled in said casing and secured to said other disk.

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

ALEXANDER J. LOGUIN. [L. S.]

Witnesses:
H. D. JAMES,
H. A. STEEN.