C. H. TAYLOR.

SHAFT CONNECTION.

APPLICATION FILED NOV. 16, 1914.

1,160,462. Patented Nov. 16, 1915.

Fig. 1

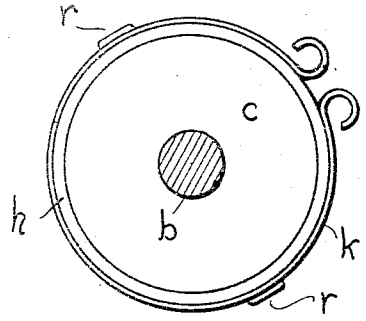


Fig. 2

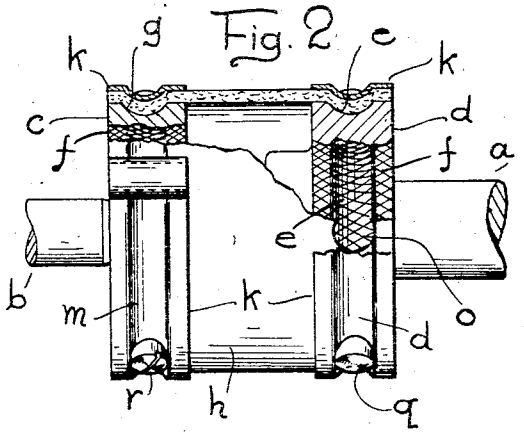


Fig. 3

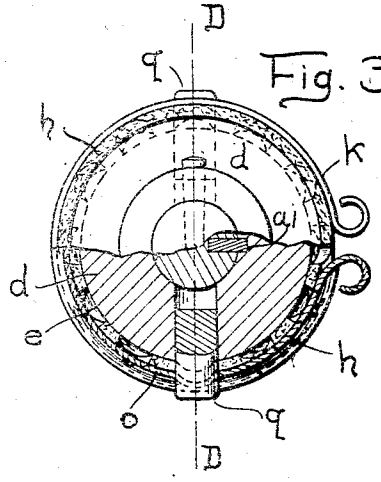


Fig. 4

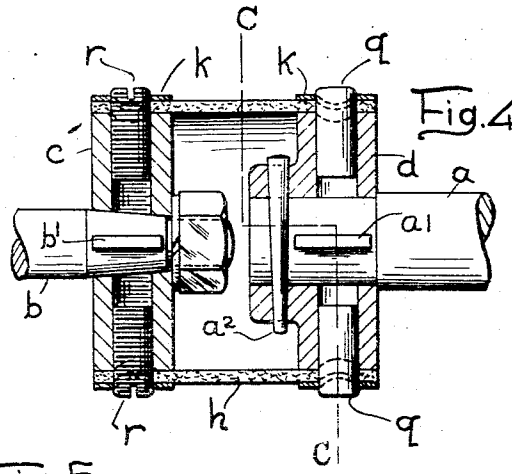
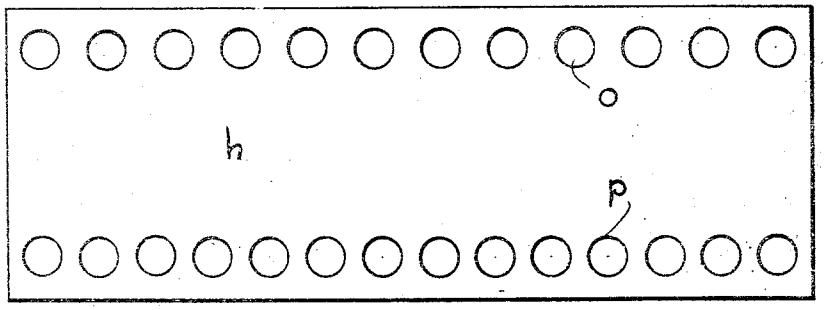


Fig. 5



WITNESSES

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SHAFT CONNECTION.

1,160,462. Specification of Letters Patent. Patented Nov. 16, 1915.

Application filed November 16, 1914. Serial No. 872,289.

To all whom it may concern:

Be it known that I, CECIL HAMELIN TAYLOR, a citizen of the United States, residing at Detroit, county of Wayne, State of Michigan, have invented a certain new and useful Improvement in Shaft Connections, and declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to shaft connections and an object of my improvements is to provide an improved flexible connection for joining two shafts by which the relative angular position of said shafts may be easily adjusted.

My improvements have in view the connection of the driving shaft to the magneto or dynamo used upon an automobile, and I have shown it in a form adapted to this use. I secure this object in the device illustrated in the accompanying drawing:

Figure 1, is an end view of the device embodying my invention with so much of the apparatus in connection with which it is used as is necessary to illustrate its connection therewith. Fig. 2, is a side view of the same partly broken away to show parts of the construction which would otherwise be obscured by intervening parts. Fig. 3, is a transverse sectional view on the line C—C Fig. 4. Fig. 4, is a longitudinal sectional view on the line D—D Fig. 3. Fig. 5, is a view of the connecting band separate from the apparatus with which it is used.

a may be the driving shaft and *b* the driven shaft: *c* is a cylindrical disk on the end of the shaft *b* and *d* is a similar disk on the end of the shaft *a*. These disks are provided with grooves *e* and *g* around their peripheries. The edges between these grooves and the faces of the disks are milled, as shown at *f* Fig. 2, as are also the walls or surfaces bounding the grooves.

h is a band, or belt, of flexible material, which may be leather, of such a length that it may be wrapped around the peripheries of the disks *c* and *d* with its ends meeting and of such a breadth that it shall extend between the outer faces of said disks.

o is a series of holes through the band *h* arranged in line with each other adjacent to and parallel with one edge thereof and *p* is another series of holes adjacent to and parallel with the other edge of said band. There is a different number of holes in one of said series from that in the other, as shown, there are twelve holes equally spaced from each other in the series *o* and fourteen in the series *p*.

q, *q* are pins fixed in the disk *d* laterally thereto and extending from the peripheries at the center thereof and *r r* are similar and similarly located pins in the disk *c*. The pins *q* are shown as fixed frictionally in radial apertures in the disk *d* and the pins *r* are indicated as secured by screw threads engaging in corresponding threads in similar apertures in the disk *c*. The holes *o* are adapted to fit over the radial pins *q*, *q* and the holes *p* over the radial pins *r r*.

k is a resilient band adapted to pass around the periphery of the disk *c* or *d* and by its elasticity to clamp against the surface of said disk. The bands *k* are bent downward at their centers so as to form a convex shaft in cross section adapted to fit into the grooves *e* or *g* as most distinctly shown in Fig. 2, and said bands are provided with apertures which fit over the pins *q* and *r*.

The method of adjusting the above described parts is as follows: The band *h* is passed around the peripheries of the disks *c* and *d*, two of the holes *o* passing over the pins *r r* and two of the holes *p* passing over the pins *q q*. The resilient bands *k k* are then clamped around the peripheries of the disks *c* and *d*, and said band, so as to press said band into the grooves *e* and *g* and bind the band against the peripheries of said disk. The two shafts *a* and *b* will now be joined by the band *h* so that the rotation of one of said shafts will be thereby communicated to the other. The bands *k* will be against the material of the band *h* where it lies contiguous to the pins *q* and *r* and act to prevent the abrading of the material.

If it is desired to adjust the relative angular positions of the shafts *a* and *b* the band *h* is removed and replaced with the pins *q q* and *r r* passing through other holes in the respective series of holes *o* and *p* and inasmuch as there is a different number of holes in one series from that in the other and therefore the holes are differently spaced in the two series, the angular position of the shafts *a* and *b* will be changed in proportion to the difference in spacing of the holes and the number of holes that the

band has been moved from its former position. This adjustment is analogous to the familiar use of the vernier scale.

With this connection the two shafts may be out of line or may be at an angle to each other.

The grooves in the peripheries of the disks act to retain the bands *k* in their proper plane and prevent lateral displacement thereof.

What I claim is:

1. The combination of a driving and a driven shaft, a disk on each of said shafts, a flexible band passing around the periphery of one of said disks, and a resilient clamp passing around the periphery of one of said disks and said band, said band engaging the other of said disks.

2. The combination of a driving and a driven shaft, a disk on each of said shafts, one of said disks being provided with a groove around its periphery, a band adapted to extend around the periphery of one of said disks, and an elastic clasp adapted to pass around the periphery of said disk and said band and press said band into said groove, said band engaging the other of said disks.

3. The combination of a driving and a driven shaft, a disk upon each of said shafts, a pin extending from the periphery of each of said disks, a band passing around the peripheries of said disks, said band being provided with holes adapted to removably engage over said pins.

4. The combination of a driving and a driven shaft, a disk upon each of said shafts, a pin extending from the periphery of each of said disks, a band passing around the peripheries of said disks, said band being provided with holes adapted to engage over said pins, and means for retaining said band in position on said disks.

5. The combination of a driving and a driven shaft, a disk on each of said shafts, a pin extending from the periphery of each of said disks, a band, said band being provided with a series of holes toward one edge thereof, and a series of holes toward the other edge thereof, the holes in said series being differently spaced, said holes being adapted to engage over said pins.

6. The combination of a driving and a driven shaft, a disk upon each of said shafts, a plurality of pins extending from the periphery of each of said disks, a band adapted to extend around the peripheries of said disks, said band being provided with a series of holes toward one edge thereof adapted to engage over the pins in one of said disks, and a series of holes toward the other edge thereof adapted to engage over the pins extending from the periphery of the other of said disks, the holes in one of said series being differently spaced from the holes in the other of said series.

7. The combination of a driving and a driven shaft, a disk on each of said shafts, one of said disks being provided with a groove around its periphery, a band secured to the other disk and adapted to extend around the periphery of said first disk and to be pressed into said groove, and means for pressing said band into said groove, substantially as and for the purpose described.

8. The combination of a driving and a driven shaft, a disk on each of said shafts, a flexible band engaging the peripheries of said disks, a resilient clamp passing around the periphery of one of said disks and said band in the plane of said disk, and means for retaining said clamp in said plane.

In testimony whereof, I sign this specification in the presence of two witnesses.

CECIL HAMELIN TAYLOR.

Witnesses:

AGNES M. HIPKINS,

ELLIOTT J. STODDARD.