No. 732,606. PATENTED JUNE 30, 1903.

M. TOPLIFF.

ECCENTRIC.

APPLICATION FILED JAN. 20, 1903.

NO MODEL.

Fig. 1.

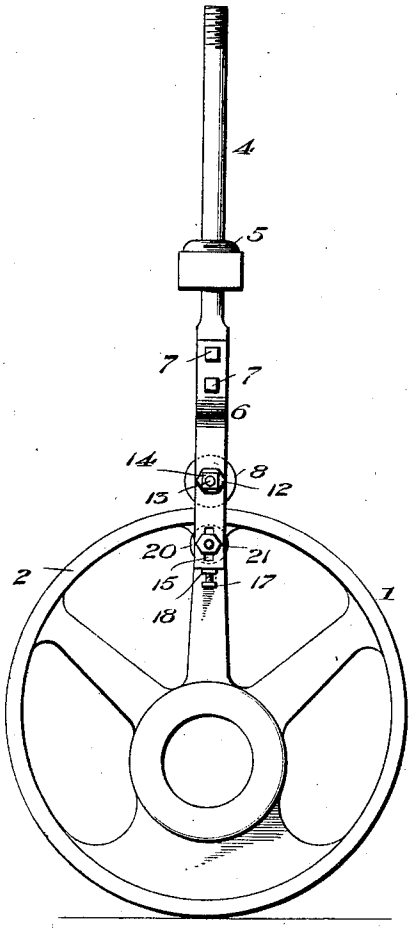


Fig. 2.

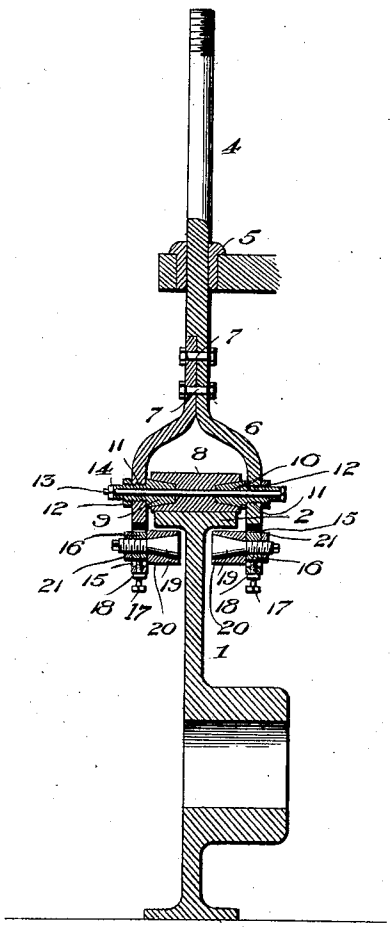


Fig. 3.

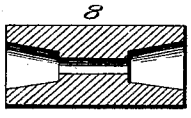


Fig. 4.

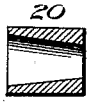
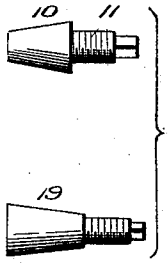


Fig. 5.



Witnesses

Inventor

Myron Topliff

by Henry N Coff

his Attorney.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 732,606. Patented June 30, 1903.

UNITED STATES PATENT OFFICE.

MYRON TOPLIFF, OF WALLACE, IDAHO.

ECCENTRIC.

SPECIFICATION forming part of Letters Patent No. 732,606, dated June 30, 1903.

Application filed January 20, 1903. Serial No. 139,837. (No model.)

To all whom it may concern:

Be it known that I, MYRON TOPLIFF, a citizen of the United States, residing at Wallace, county of Shoshone, and State of Idaho, have invented certain new and useful Improvements in Eccentrics, of which the following is a specification.

My invention relates to eccentrics, and more particularly to eccentric connections.

The object of the present invention is the provision of an improved and novel eccentric connection which will minimize friction, be simple, strong, and durable, and prevent heating and cutting and other defects of the ordinary eccentric connection.

Having the foregoing objects in view, the invention consists of an eccentric connection of improved form and novel construction employing rollers of improved form coöperating with the eccentric in a novel manner and dispenses with the eccentric-strap ordinarily used, such as set forth in detail hereinafter, while the novel features are recited in the appended claims.

In the accompanying drawings, Figure 1 is a side elevation; Fig. 2, a section on line $x\,x$ of Fig. 1, and Figs. 3, 4, and 5 details of the rollers and their bearings.

The numeral 1 designates an eccentric which has a rim 2 ground smooth on its outer and inner faces. The eccentric-rod is shown at 4 and is guided in stationary bushing 5, and this rod instead of being jointed, as is the case with the ordinary eccentric-rod, is made rigid throughout its extent, and it is provided with a two-part yoke 6, the movable member of which is secured by bolt 7, said yoke being adapted to straddle the rim of the eccentric. The members of the yoke may be curved or angular, as preferred.

The numeral 8 designates a roller of substantially the same width as the eccentric-rim 2 and adapted to bear against the outer face of said rim. This roller has cone-shaped countersinks in its ends, which receive and have a bearing on cone-shaped members 9 and 10, said members having screw-threads 11 and being threaded into the members of the yoke 6 and provided with clamping-nuts 12 to hold the members against turning. The outer ends of the members 9 and 10 are made square for the application of a suitable tool to adjust them to compensate for wear and to give a proper bearing on the roller 8. A rod 13 passes through the roller 8 and the members 9 and 10 and is provided with nuts 14 on its screw-threaded ends. This rod strengthens the yoke and centers the parts and also provides a bearing for the roller 8. The ends of the yoke members have slots 15, in which are adjustable blocks 16, capable of adjustment by the screws 17, which have clamping-nuts 18 to secure the blocks where adjusted. Threaded in the blocks are cone-shaped bearing members 19, on which are journaled the rollers 20, which bear against the under side of the rim 2 on opposite sides of the spokes or spider of the eccentric. The members 19 have squared ends, so they can be easily screwed into the blocks, and the nuts 21 are provided for holding them. By adjusting the blocks in the slots the rollers 20 are made to bear against the under side of the eccentric-rim 2, while the roller 8 bears against the outer face of said rim. There is therefore no possible looseness to the connection, while the friction is reduced to a minimum as the eccentric turns and the eccentric-rod simply reciprocates, and hence there is no necessity for a joint in the eccentric-rod, which is a decided advantage, as the friction of such a joint is obviated. To compensate for wear, the coned members 9, 10, and 19 can be easily adjusted.

The entire construction is light-running, the friction is reduced to a minimum, and there is practically no heating effect. At the same time the arrangement of the rollers gives a balanced action of coöperation between the eccentric-rod and the eccentric, which prevents any torsional effects and insures an even action and wear.

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

1. The combination with an eccentric and eccentric-rod, of a roller carried by the rod and bearing against the outer face of the eccentric-rim, and independent rollers carried by the rod and bearing against the under side of the eccentric-rim on opposite sides of the web or spider of the eccentric.

2. The combination with an eccentric having a rim, of an eccentric-rod, a roller carried

by the rod and of substantially the width of the eccentric-rim and bearing against the outer face of said rim, and independent rollers carried by the eccentric-rod and bearing against the under face of the eccentric-rim on opposite sides of the web or spider of the eccentric.

3. The combination with an eccentric having a rim, of an eccentric-rod, rollers carried by the eccentric-rod and bearing against the inner and outer faces of the eccentric-rim, and means for adjusting said rollers toward and away from each other.

4. The combination with an eccentric having a rim, of an eccentric-rod, rollers carried by the eccentric-rod and bearing against the outer and inner faces, respectively, of the eccentric-rim, said rod having a slot, and a bearing-pin for one of said rollers, said pin being movable in the slot, whereby the rollers can be relatively adjusted toward and away from each other.

5. The combination with an eccentric having a rim, of an eccentric-rod, a roller carried by the rod and bearing against the eccentric-rim, means to hold the roller in contact with the eccentric-rim and means for relatively adjusting the roller and holding means.

6. The combination with an eccentric having a rim, of an eccentric-rod, a coned pin carried by said rod, an interiorly-coned roller on said pin and bearing against the eccentric-rim, and means to hold said roller in contact with the rim.

7. The combination with an eccentric having a rim, of an eccentric-rod having a yoke straddling the rim of the eccentric, a roller carried by the yoke and bearing against the outer face of the eccentric-rim, and rollers carried by the respective arms of the yoke and bearing against the under side of the eccentric-rim on opposite sides of the web or spider of the eccentric.

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

MYRON TOPLIFF.

Witnesses:
ALBERT H. FEATHERSTONE,
GEORGE R. TRASK.