(No Model.)

H. B. McKEE.

ECCENTRIC.

No. 598,253. Patented Feb. 1, 1898.

Fig. 1.

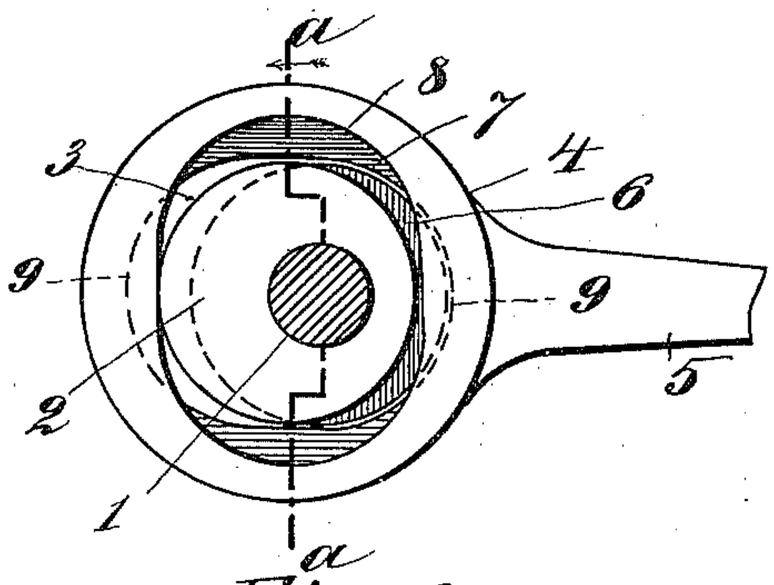


Fig. 2.

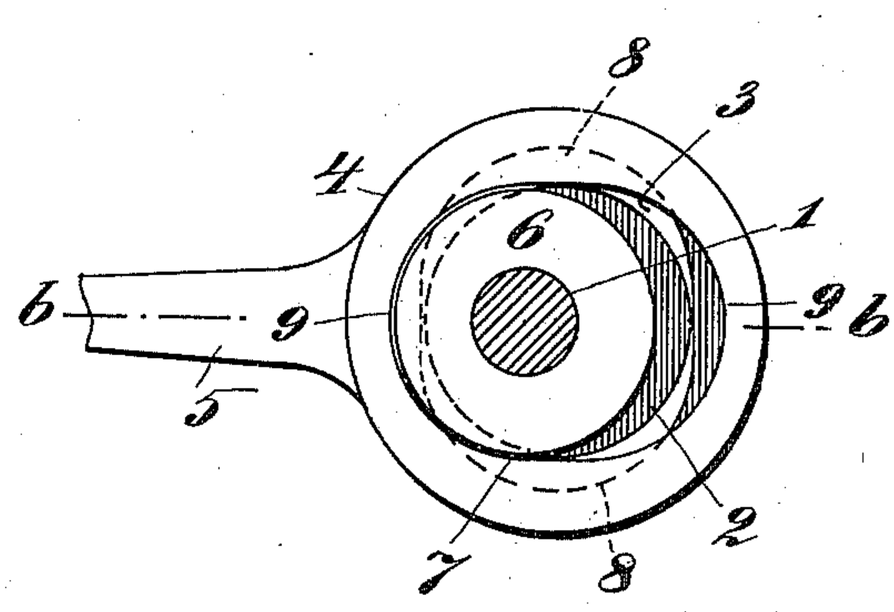


Fig. 3.

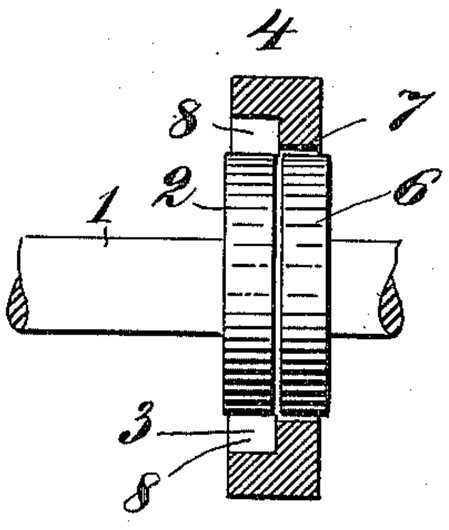


Fig. 4.

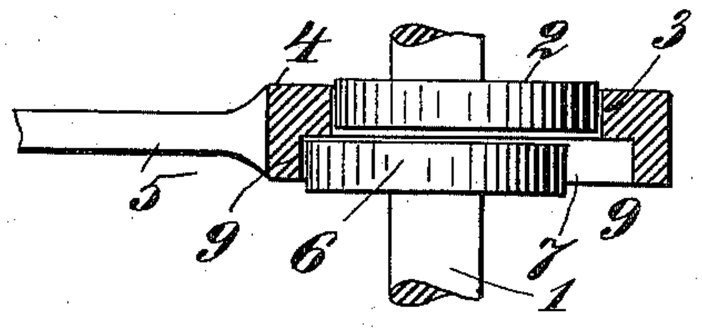


Fig. 5.

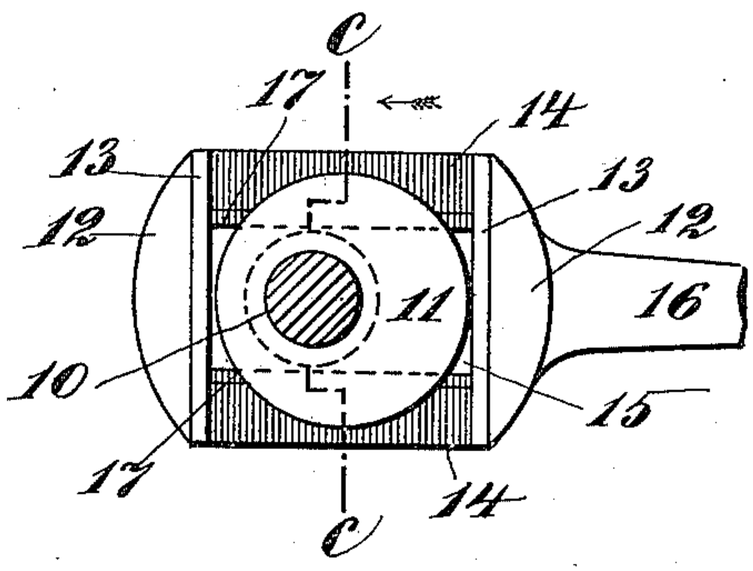


Fig. 6.

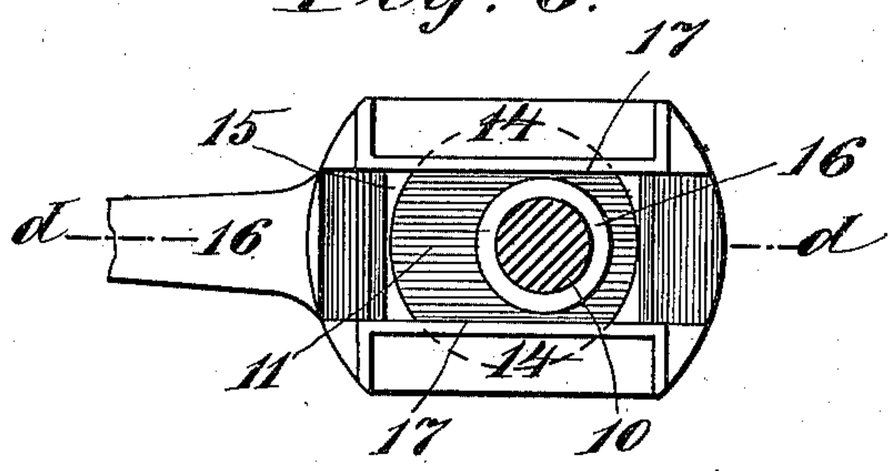


Fig. 7.

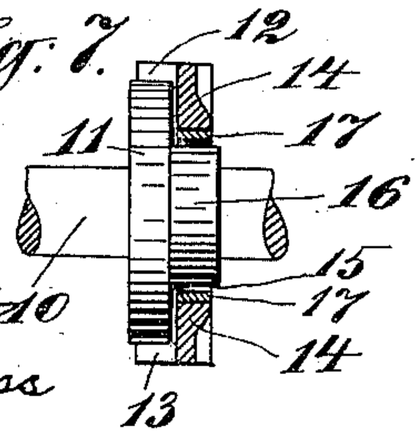
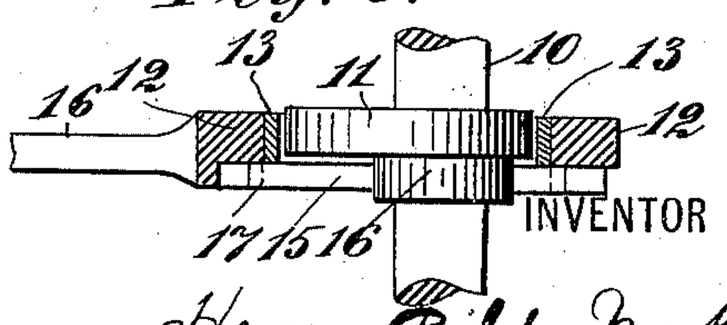


Fig. 8.



WITNESSES:

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BY

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UNITED STATES PATENT OFFICE.

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ECCENTRIC.

SPECIFICATION forming part of Letters Patent No. 598,253, dated February 1, 1898.

Application filed June 26, 1897. Serial No. 642,361. (No model.)

To all whom it may concern:

Be it known that I, HENRY BELDEN McKEE, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Eccentrics, of which the following is a specification.

This invention relates to certain improvements in eccentrics, and has for its object to provide an eccentric of a simple and inexpensive construction which shall be adapted for converting the rotative movement of a shaft or the like into a direct reciprocating movement, whereby the oscillatory movement usually attendant upon the employment of eccentrics may be dispensed with, so that the device is adapted for use in locations where but little space is available.

The invention consists in certain novel features of the construction, combination, and arrangement of the various parts of the improved eccentric whereby certain important advantages are attained and the device is made simpler, cheaper, and otherwise better adapted and more convenient for use than various other forms of eccentric heretofore employed, all as will be hereinafter fully set forth.

The novel features of the invention will be carefully defined in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a fragmentary view showing one side of an eccentric and strap constructed in accordance with my invention. Fig. 2 is a view showing the opposite side of the device. Fig. 3 is a section taken transversely through the eccentric and strap in the plane indicated by the line *a a* in Fig. 1. Fig. 4 is a sectional view taken through the eccentric and strap in the plane indicated by the line *b b* in Fig. 2. Figs. 5 and 6 are respectively views similar to Figs. 1 and 2, but showing a modified construction of the eccentric. Fig. 7 is a sectional view taken through the eccentric in the plane indicated by the line *c c* in Fig. 5, and Fig. 8 is a sectional view taken in the plane indicated by the line *d d* in Fig. 6.

Referring first to Figs. 1 to 4, 1 indicates the shaft, on which the eccentric is secured, and 2 indicates the eccentric-disk, which may be of any form or proportions desired, being arranged to move in a slot 3, formed transversely in the strap 4 of the eccentric, which strap is connected with the rod 5 in any preferred way. To one side of the eccentric-disk 2 is secured in any preferred way a circular boss or hub 6, forming a guide and having its circumference formed concentric with respect to the shaft 1, whereon the eccentric is mounted, and said boss 6 is arranged to play or work in a slot or opening 7, formed in the strap 4 and extending at an angle to the slot 3, wherein the eccentric-disk 2 works, as will be clearly seen by reference to the several figures of the drawings. As herein shown, the slots 3 and 7 are arranged at right angles to each other, and the end portions 8 of the slot 3 overlap the sides of the slot 7, while the end portions 9 of said slot, overlap the side portions of the slot 3. By this construction it will be seen that as the eccentric-disk 2 turns within the strap 4 said strap 4 will be moved in a direction parallel to the length of the rod 5, but will not be moved or permitted to oscillate laterally, since the strap 4 will be guided upon the boss or hub 6, the elongated form of the slot 3, wherein the eccentric-disk 2 works, permitting said disk to turn without imparting lateral or oscillatory movement to the strap.

The construction shown in Figs. 5 to 8 is substantially similar to that above described, excepting that the walls of the eccentric-strap are cut out or broken away at the ends of the slot wherein the eccentric-disk works. In this form of the device, 10 indicates the shaft whereon the eccentric is mounted, and 11 indicates the eccentric-disk, having its opposite sides arranged to engage projections or shoulders 12 12, formed at opposite ends of the eccentric-strap, being provided with wearing-plates or brasses 13, and the said end portions of the eccentric-strap whereon the lugs 12 are formed are connected together by longitudinal ties or braces 14, arranged at opposite sides of the shaft 10 and spaced apart to form a central slotted opening 15 between them.

In the slotted opening 15, formed between

the braces 14, extending at opposite sides of the strap, works a boss or collar 16, formed on or secured to the side of the eccentric-disk 11, and the said braces 14 will be by preference provided with wearing-plates or brasses 17, secured to their inner sides, as will be readily understood. The eccentric-strap is provided with a rod 16 and is of an elongated form, its opposite sides being flattened, so that, as will be readily seen, said strap will take up but little space and will be better adapted for use in complicated mechanisms where it is desirable to have the operating parts arranged as compactly as possible.

It will also be seen from the above description of my invention that the construction of the eccentric is such that the strap may be turned with respect to the shaft 1 or 10, so as to cause the rod 5 to stand in any radial position to said shaft, whereby the devices actuated from the eccentric may be swung around in a circular path and may be actuated in any position in which they may stand. Where fixed guides are employed, this would be impossible, as will be readily observed.

From the above description it will be seen that the device is of an extremely simple and inexpensive construction and is well adapted for the purposes for which it is designed, since it permits the eccentric to be employed where its employment would otherwise be impossible by reason of the lateral movement or oscillation imparted to the eccentric-strap during the turning of the disk therein, and it will also be obvious from the above description that the invention is susceptible of some modification without material departure from its principles and spirit, and for this reason I do not wish to be understood as limiting myself to the precise form and arrangement of the parts herein set forth.

Having thus described my invention, I claim—

1. The combination of an eccentric adapted to be secured to a shaft or the like, a circular guide concentric with the axis of the shaft on which the eccentric is secured, a strap, a rod connected to the strap, said strap having an opening wherein the eccentric works arranged to extend transversely to the direction of the length of the rod, and being provided with another elongated opening extending at angles to the first-named opening and adapted to receive the guide, substantially as set forth.

2. The combination of an eccentric-disk adapted to be secured to a shaft or the like, a boss connected to one side of the disk and having its circumference concentric with the axis of rotation of the eccentric-disk, a strap, and a rod connected to said strap, said strap having two elongated openings extending at angles to each other, one opening being adapted to receive the eccentric-disk and the other opening being adapted to receive the boss connected thereto, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY BELDEN McKEE.

Witnesses:

PETER A. ROSS,

HENRY CONNETT.