March 25, 1924. 1,487,785

B. L. KNOWLES

BEARING WRENCH

Filed Aug. 19, 1921

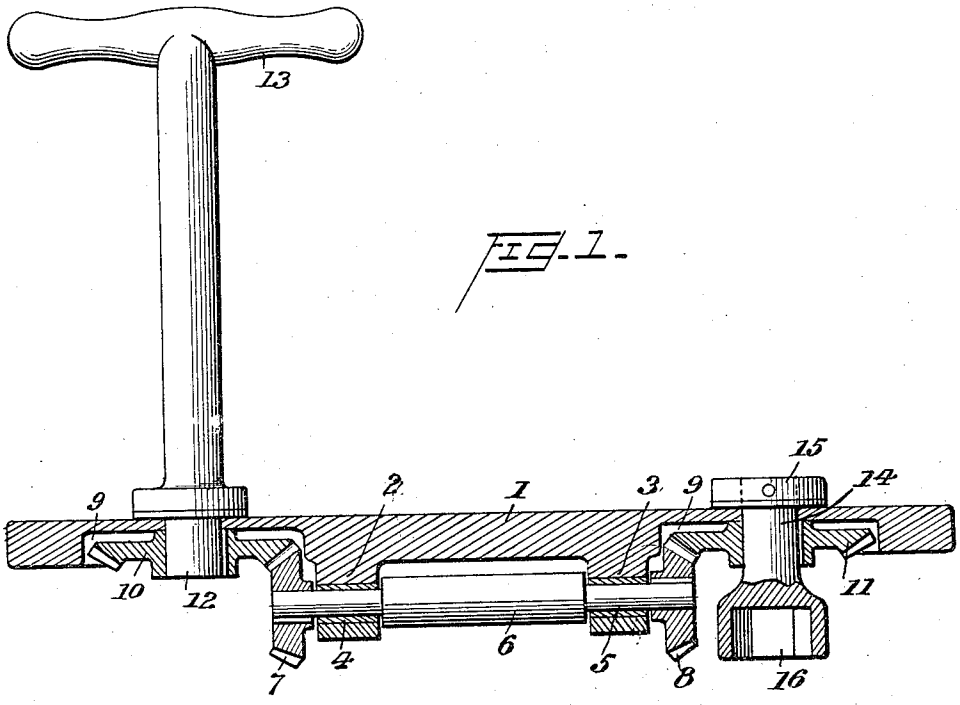


FIG. 1.

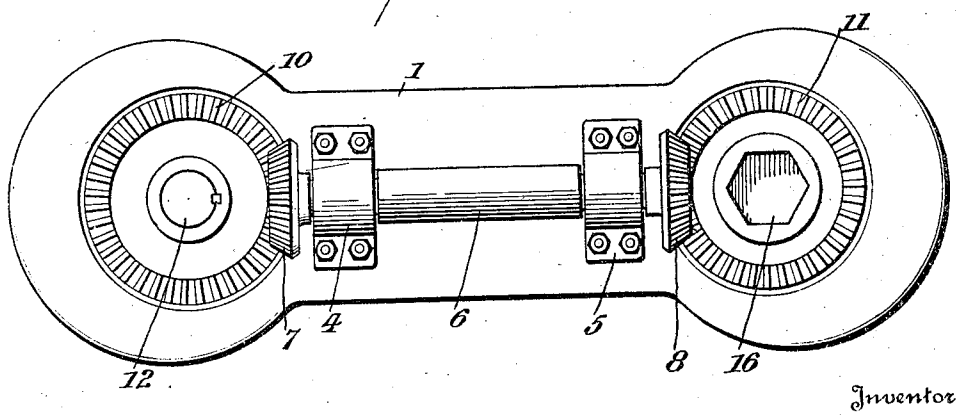


FIG. 2.

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UNITED STATES PATENT OFFICE.

BUFORD L. KNOWLES, OF CHATTAHOOCHEE, FLORIDA.

BEARING WRENCH.

Application filed August 19, 1921. Serial No. 493,552.

To all whom it may concern:

Be it known that BUFORD L. KNOWLES, a citizen of the United States, residing at Chattahoochee, in the county of Gadsden and State of Florida, has invented certain new and useful Improvements in Bearing Wrenches, of which the following is a specification.

This invention relates to new and useful improvements in wrenches and more particularly to a bearing wrench and the primary object of the invention is to provide an improved wrench of this character applicable particularly to the main bearing known as bearing No. 4 on the well known Ford automobiles.

A further object of the invention resides in providing a device of this character which can be readily applied to the bearing without difficulty which is usually encountered in operating upon this portion of the automobile.

Still another object of the invention resides in providing a simple and efficient device of this character which is inexpensive to manufacture and which will be very effective in operation.

With these and other objects in view my invention consists in the novel features of construction, combination and arrangement of parts as will be hereinafter referred to and more particularly pointed out in the specification and claims.

In the accompanying drawing forming a part of this application—

Figure 1 is a longitudinal section through a wrench constructed in accordance with my invention, and

Fig. 2 is a bottom plan view thereof.

In describing the invention I shall refer to the drawing in which similar reference characters designate corresponding parts throughout the several views and in which 1 designates a body of elongated form having its ends somewhat circular in formation and formed integral with the under face of said body in spaced relation are the integral lugs 2 and 3 which are designed to receive bearings 4 and 5 respectively. Rotatably received in the bearings 4 and 5 are the reduced ends of a rotatable shaft 6 and said reduced ends of said shaft have removably secured thereto the beveled gears 7 and 8, facing in opposite directions. The under faces of the circular end portions of the body 1 are recessed as at 9 and disposed in each recess is a bevel gear said gears being designated, respectively, as 10 and 11. The gears 10 and 11 are of larger diameter than the gears 7 and 8 and respectively mesh with the latter gears. The gear 10 is keyed or otherwise similarly secured to the lower end of a shaft 12 which is rotatably supported in an opening in the body 1 and extends considerably thereabove. The outer end of the shaft 12 is provided with a handle 13 to be manually actuated for the purpose of operating the wrench.

The beveled gear 11 is keyed or otherwise similarly secured to a shaft 14 which has a collar 15 on its outer end supporting the same rotatably on the body 1. The lower end of the shaft 14 is provided with a socket 16 which is adapted to receive therein the particular bearing to be operated upon.

From the foregoing description of this invention it will be seen that by rotating the handle 13 on the shaft 12, the gear 10 will be rotated which in turn rotates the gear 7 and as this gear is carried on one end of the shaft 6, the gear 8 on the opposite end of the shaft will be rotated, correspondingly rotating the gear 11. The shaft 14 to which the gear 11 is secured will correspondingly be rotated, thus causing the socket 16 to be rotated and thus operating the bearing desired.

From this description the operation of the invention will be readily understood and it will be seen that I have provided a simple, efficient and inexpensive means for carrying out the objects of the invention.

While I have particularly described the elements best adapted to perform the functions set forth, it is obvious that various changes in form, proportion and in the minor details of construction may be resorted to, without departing from the spirit or sacrificing any of the principles of the invention.

Having thus described my invention what I claim is:

1. A wrench of the class described comprising a body having a pair of spaced lugs formed on the under face thereof and provided with recesses adjoining said lugs, bearings formed on said lugs, a shaft rotatably supported in said bearings, beveled gears secured to the ends of said shaft and additional beveled gears rotatably supported in said recesses, a shaft engaged with one

of the last mentioned beveled gears and provided with a socket, a shaft in connection with the other said last mentioned beveled gears and a handle on the last mentioned shaft for rotating the same, whereby said socket in connection with the other said beveled gears will be rotated.

2. A wrench of the class described comprising an elongated body having spaced lugs depending from the underface thereof, bearings in the said lugs, a longitudinal shaft rotatably supported in the said bearings and lugs, beveled gears mounted at the respective ends of the said longitudinal shaft, transverse rotatable shafts carried by the said elongated body and arranged adjacent the respective ends thereof, additional beveled gears mounted on said transverse rotatable shafts and arranged on the underface of the said body and respectively meshing with the aforesaid beveled gears, a socket at one end of one of the transverse rotatable shafts, and a handle carried by the other transverse rotatable shaft for rotating the beveled gears whereby the said socket is caused to be rotated.

In testimony whereof I affix my signature.

BUFORD L. KNOWLES.