

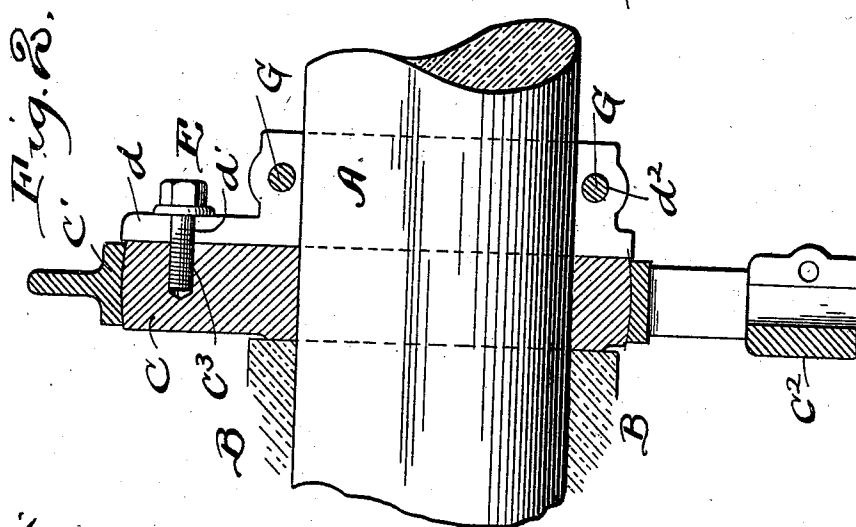
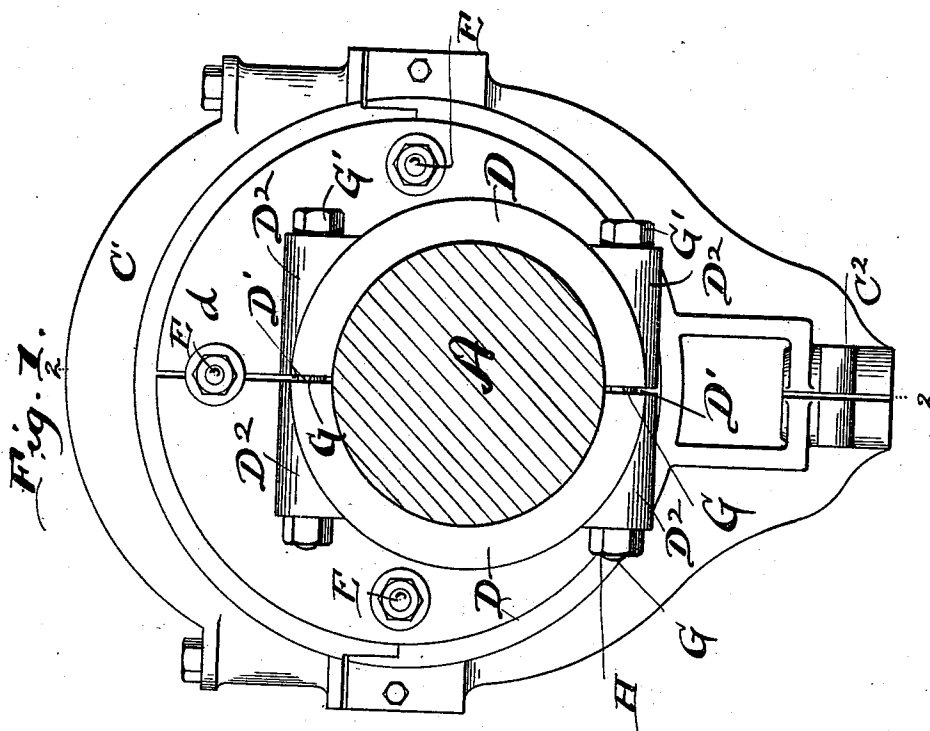
(No Model.)

2 Sheets—Sheet 1.

A. K. MANSFIELD.  
MEANS FOR HOLDING ECCENTRICS.

No. 544,511.

Patented Aug. 13, 1895.



Witnesses,  
E. Pyron Gilchus  
C. W. W.

Inventor,  
Albert K. Mansfield  
By Leggett & Leggett  
his Attorneys.

(No Model.)

2 Sheets—Sheet 2.

A. K. MANSFIELD.  
MEANS FOR HOLDING ECCENTRICS.

No. 544,511.

Patented Aug. 13, 1895.

Fig. 3.

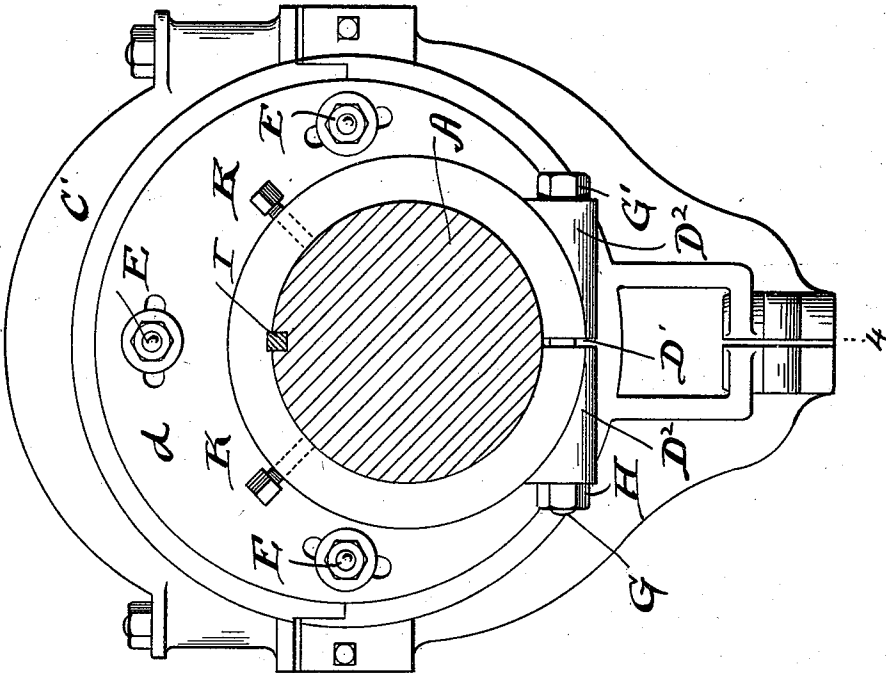
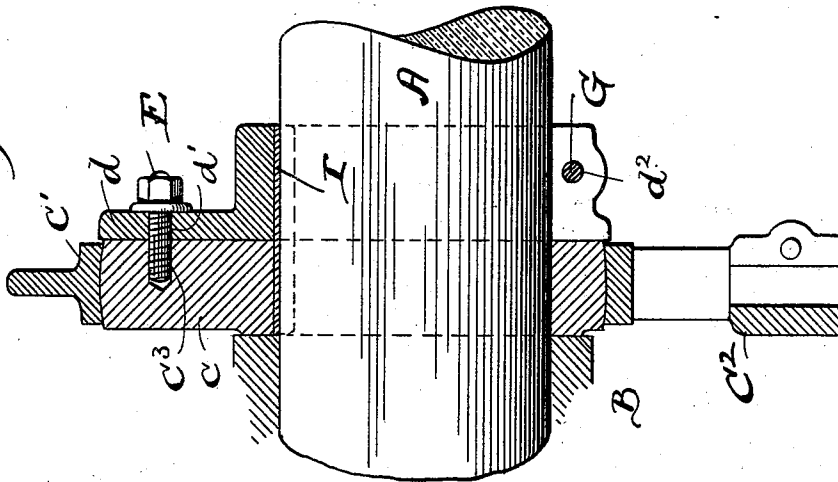


Fig. 4.



Witnesses,  
E. B. Gulchert  
Crawson

Inventor,  
Albert K. Mansfield  
By Leggett Leggett  
his Attorneys

# UNITED STATES PATENT OFFICE.

ALBERT K. MANSFIELD, OF SALEM, OHIO, ASSIGNOR OF ONE-HALF TO THE  
BUCKEYE ENGINE COMPANY, OF SAME PLACE.

## MEANS FOR HOLDING ECCENTRICS.

SPECIFICATION forming part of Letters Patent No. 544,511, dated August 13, 1895.

Application filed August 26, 1893. Serial No. 484,138. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT K. MANSFIELD, of Salem, in the county of Columbiana and State of Ohio, have invented certain new and useful Improvements in Means for Holding an Engine-Valve-Gear-Operating Eccentric to its Shaft; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use the same.

My invention relates to improvements in means for holding the eccentric employed to operate the valve-gear of an engine to its shaft.

It is the object of my invention to provide means for the purpose indicated, whereby the eccentric is firmly attached to the shaft, and whereby the angular position of the eccentric on the shaft can be adjusted with the greatest facility; and with this object in view my invention consists in certain features of construction and in combinations of parts hereinafter described, and pointed out in the claims.

In the accompanying drawings, Figure 1 is an end elevation of means embodying my invention, the engine-shaft being shown in section; and Fig. 2 is a side elevation in central section on line 2 2, Fig. 1, exhibiting also the main bearing of the shaft. Fig. 3 is an end elevation exhibiting a construction somewhat modified as compared with that shown in Figs. 1 and 2; and Fig. 4 is a side elevation in central section on line 4 4, Fig. 3. I would here remark that the construction shown in Figs. 1 and 2 is more especially designed for large engines, whereas the construction shown in Figs. 3 and 4 is more especially designed for small engines.

Referring to the drawings, A represents the engine-shaft; B, the main bearing; C, the eccentric, and C' the eccentric-strap, to which the eccentric-rod (not shown) for operating the valve-gear is adapted to be operatively attached at C<sup>2</sup>, the eccentric being mounted upon the shaft against bearing B and the eccentric-strap embracing the eccentric in the usual manner. The eccentric C is firmly held in position upon the shaft against bearing B and in the desired angular position by means of a clamp-collar D, that is mounted upon the shaft at the side of the eccentric opposite to

the location of bearing B and secured to the eccentric preferably by means of bolts or studs E, that extend through slots or holes *d'* in the eccentric-shaped laterally-projecting flange *d* of the clamp-collar into corresponding holes C<sup>3</sup> in the eccentric. Preferably three bolts or studs E are provided, as shown. For large engines the clamp-collar is preferably split radially at diametrically or approximately diametrically opposite points, as at D' in Fig. 1, thereby dividing the collar into half-sections, and each half-section is provided with a pair of lugs or ears D<sup>2</sup>, located at opposite sides of the half-section, respectively, and perforated preferably at right angles to the axial line of the shaft, as shown at *d*<sup>2</sup>. The perforations of adjacent lugs or ears D<sup>2</sup> of the collar-sections register with each other, and G designates bolts that extend through the registering perforations of adjacent ears or lugs, respectively, the head G' of the respective bolts abutting the outer end of the one ear or lug, and a nut H being mounted upon the correspondingly-threaded shank of the bolt at the outer end of the other lug or ear.

By the construction hereinbefore described it will be observed that by tightening nuts H upon bolts G, upon having secured the eccentric in the required position upon the shaft against bearing B, the collar is firmly clamped upon the shaft, thereby securely holding the parts in place.

My improved construction is exceedingly simple and convenient, and it is quite obvious that by my construction there is no liability of the eccentric being strained out of round or shape in securing the same in the desired position upon the shaft.

The somewhat modified construction shown in Figs. 3 and 4 is, as already indicated, more especially designed for light engines. The construction is substantially the same as that hereinbefore described, excepting that the clamping-collar is split only at one side and but a single pair of lugs or ears D<sup>2</sup> and a single bolt G and nut H are required to clamp the collar upon the shaft.

In case of the construction shown in Figs. 3 and 4, collar D, in addition to being clamped upon the shaft, as hereinbefore described, may also be keyed to the shaft, as shown at I, and

further secured to the shaft by means of one or more set-screws K. By such construction the collar is positively held in place upon the shaft.

5 I would also remark that holes C<sup>3</sup> in flange  
d of the collar, that receive bolts E, are preferably elongated concentrically with the axis  
of the shaft, as shown in Fig. 3, by which construction it is merely necessary to loosen bolts  
10 E in order to change the angular position of the eccentric upon the shaft, and thereupon to tighten the same to hold the eccentric and collar firmly together.

What I claim is—

15 1. The combination with the engine-shaft, main bearing and eccentric for operating the valve-gear of the engine, said eccentric being mounted upon the shaft contiguous to said

bearing, of a split-collar flanged laterally, as at d, bolts or studs E extending through said 20 flange into the eccentric, and suitable means for clamping the collar upon the shaft, substantially as set forth.

2. A split collar D, flanged laterally, as at d, and provided with perforated lugs or ears 25 D<sup>2</sup>, and means for securing together the sections of the collar, all arranged substantially as shown, for the purpose specified.

In testimony whereof I sign this specification, in the presence of two witnesses, this 26th 30 day of June, 1893.

ALBERT K. MANSFIELD.

Witnesses:

C. H. DORER,  
WARD HOOVER.