

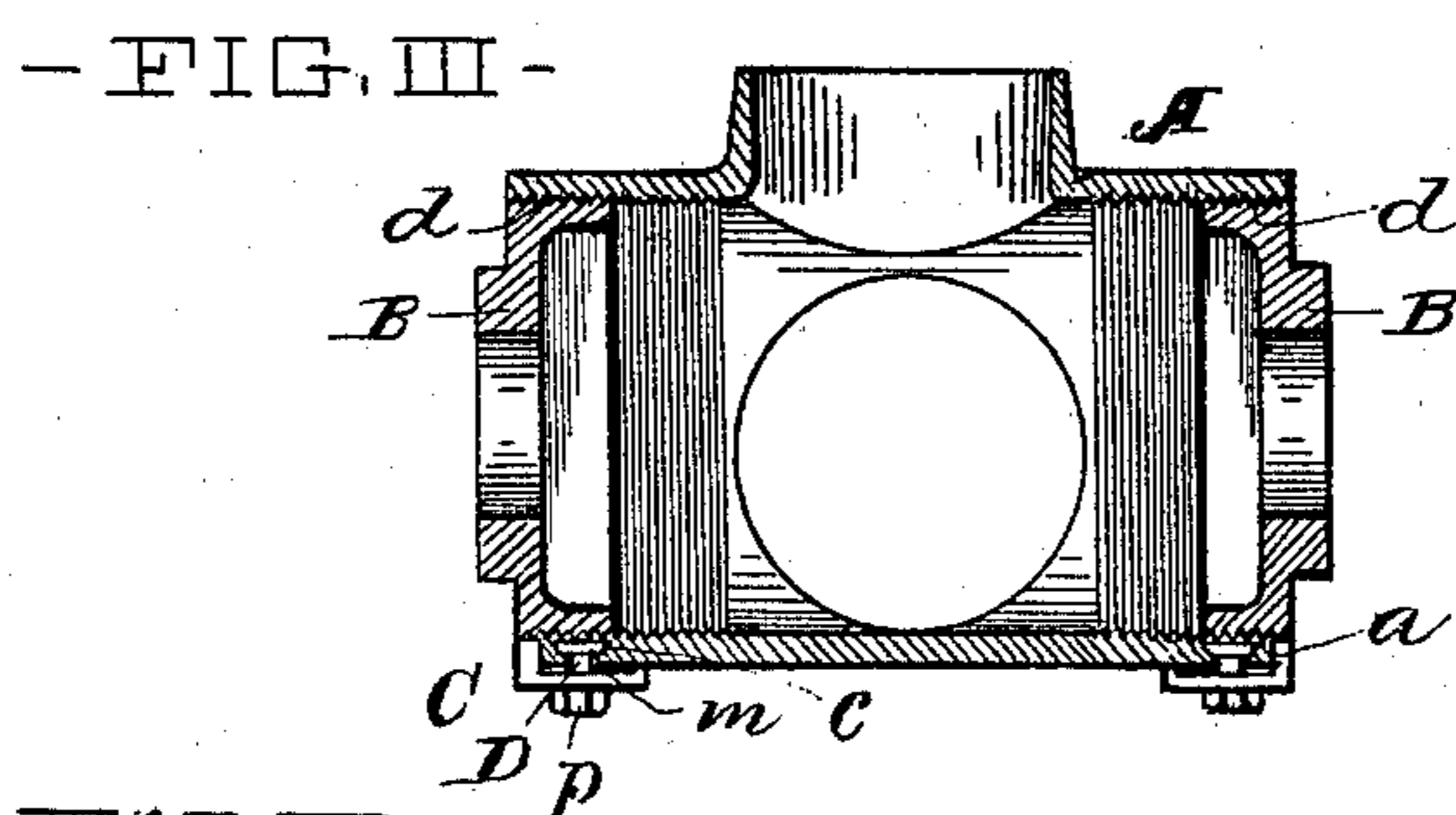
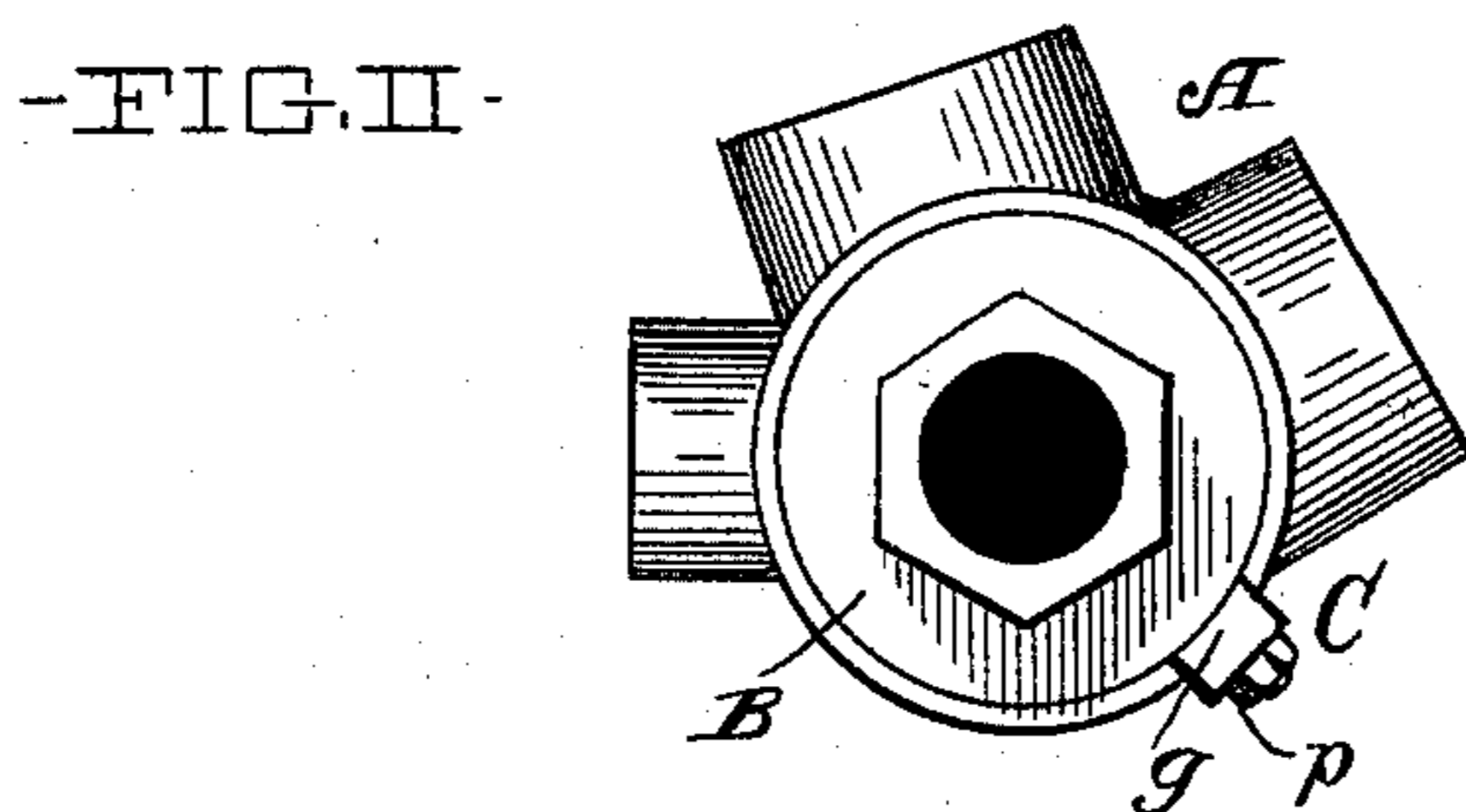
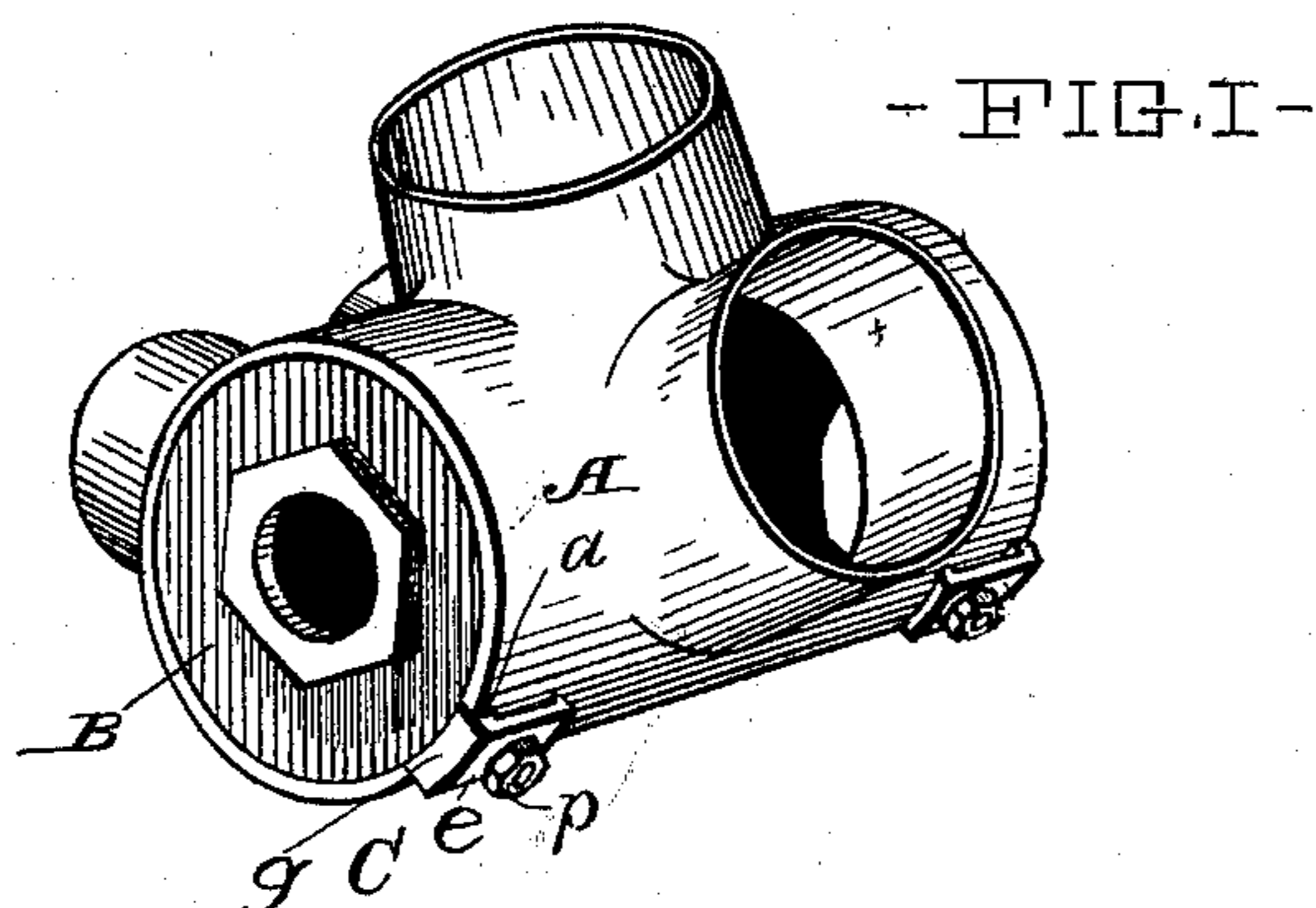
No. 610,166.

Patented Sept. 6, 1898.

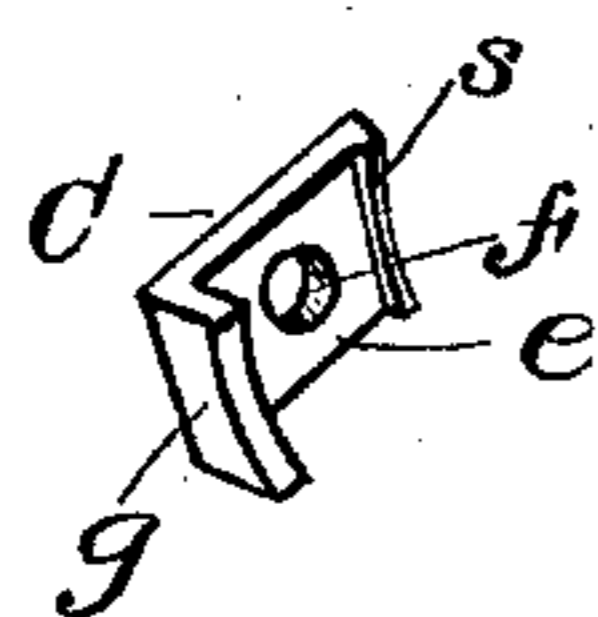
C. E. COLEGROVE.
BICYCLE BEARING.

(Application filed Jan. 29, 1897.)

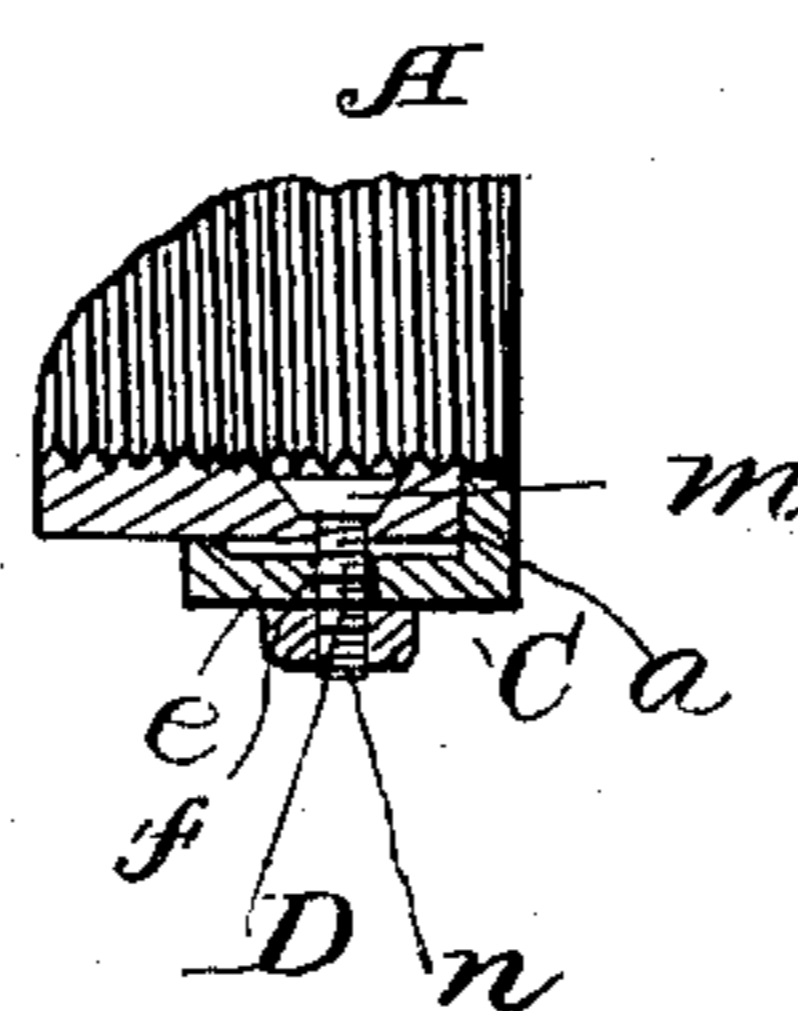
(No Model.)



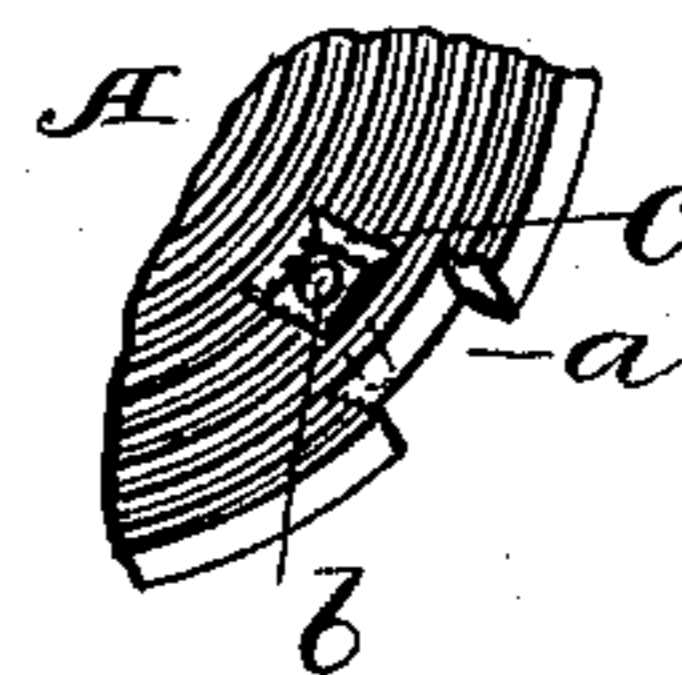
- FIG. IV -



- FIG. VI -



- FIG. V -



WITNESSES:

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INVENTOR

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UNITED STATES PATENT OFFICE.

CHARLES E. COLEGROVE, OF CLEVELAND, OHIO, ASSIGNOR TO THE WHITE SEWING MACHINE COMPANY, OF SAME PLACE.

BICYCLE-BEARING.

SPECIFICATION forming part of Letters Patent No. 610,166, dated September 6, 1898.

Application filed January 29, 1897. Serial No. 621,153. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. COLEGROVE, a citizen of the United States, and a resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Bicycle-Bearings, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle so as to distinguish it from other inventions.

In the drawings, Figure I is a view in perspective of a crank-hanger provided with my invention. Fig. II is an end elevation of the same. Fig. III is a longitudinal central section of the same. Fig. IV is a detail perspective of the angular locking device. Fig. V is a detail perspective of the peripheral interior of the crank-hanger, having the recess, perforation, and countersink. Fig. VI is a detail longitudinal central section of one end portion of the crank-hanger with the angular locking device.

The crank-hanger A is threaded on its interior for screw engagement with the ball-cup. Its end is provided with a recess *a*, and adjacent to such recess its periphery is provided with a perforation *b*, that portion of the interior of the periphery of the hanger which surrounds such perforation being provided with a square tapering-sided countersink *c*.

The ball-cup B has the screw-threaded periphery *d*, adapted to engage with the interior of the hanger, the same as though the latter were not provided with said recess, perforation, and countersink.

The locking device C is an elbow-piece having body *e* substantially parallel with the length of the hanger and detachably seated on the exterior of the periphery of the latter, such body having a perforation *f*, adapted to register with the perforation *b* of the hanger. At substantially a right angle to the outer end of such body *e* the dog *g* of the locking device projects radially inward toward the threaded periphery of the ball-cup and is of dimension suitable to fit within said recess *a* of the hanger, its free end seating on the threaded periphery of the ball-cup.

A screw-bolt D, having a square tapering-sided head *m*, detachably fastens said locking device to the hanger, such bolt-head fit-

ting within the countersink *c* and being of such relative dimension as to be outside of the circular plane of the interior threaded periphery of the hanger. The screw-threaded stem *n* of the bolt is of such dimension relative to the perforations *b* and *f* as to pass endwise freely therethrough, its outer end extending beyond the locking device and being engaged by the nut *p*, which clamps down upon the outer face of the body *e* of such locking device. The inner end of the angular locking device C is provided with a transverse flange *s*, projecting toward the crank-hanger and which causes the body *e* of the locking device to be clear from the exterior periphery of such hanger, the office of this flange being that of a fulcrum in reference to the clamping action of the bolt D. The screw-bolt is placed in the perforation of the hanger with its head in the countersink, and then the ball-cup is screwed into normal position in the end of the hanger. The locking device is then placed in position, so that its frictional bearing-dog is brought into end engagement against the threaded periphery of the ball-cup, and the locking device is thereupon fastened in position by screwing the nut on the projecting extremity of the screw-bolt and clamping the dog against the ball-cup with the desired degree of pressure, thereby locking such ball-cup against accidental movement.

I particularly point out and distinctly claim as my invention—

The combination with a crank-hanger, and a ball-cup, of a locking device having its outer end provided with a dog angular to its body and adapted to have friction end bearing against the periphery of the ball-cup, the opposite end of such locking device being provided with a transverse flange projecting toward the crank-hanger, together with a fastening device connecting such crank-hanger and locking device together, said flange serving as a fulcrum relative to the clamping action of such fastening device, substantially as set forth.

Signed by me this 27th day of January, 1897.

CHARLES E. COLEGROVE.

Attested by—

DAVID T. DAVIES,
A. E. MERKEL.