

(No Model.)

2 Sheets—Sheet 1.

J. DICK.
VALVE GEAR.

No. 329,891.

Patented Nov. 10, 1885.

Fig. 1.

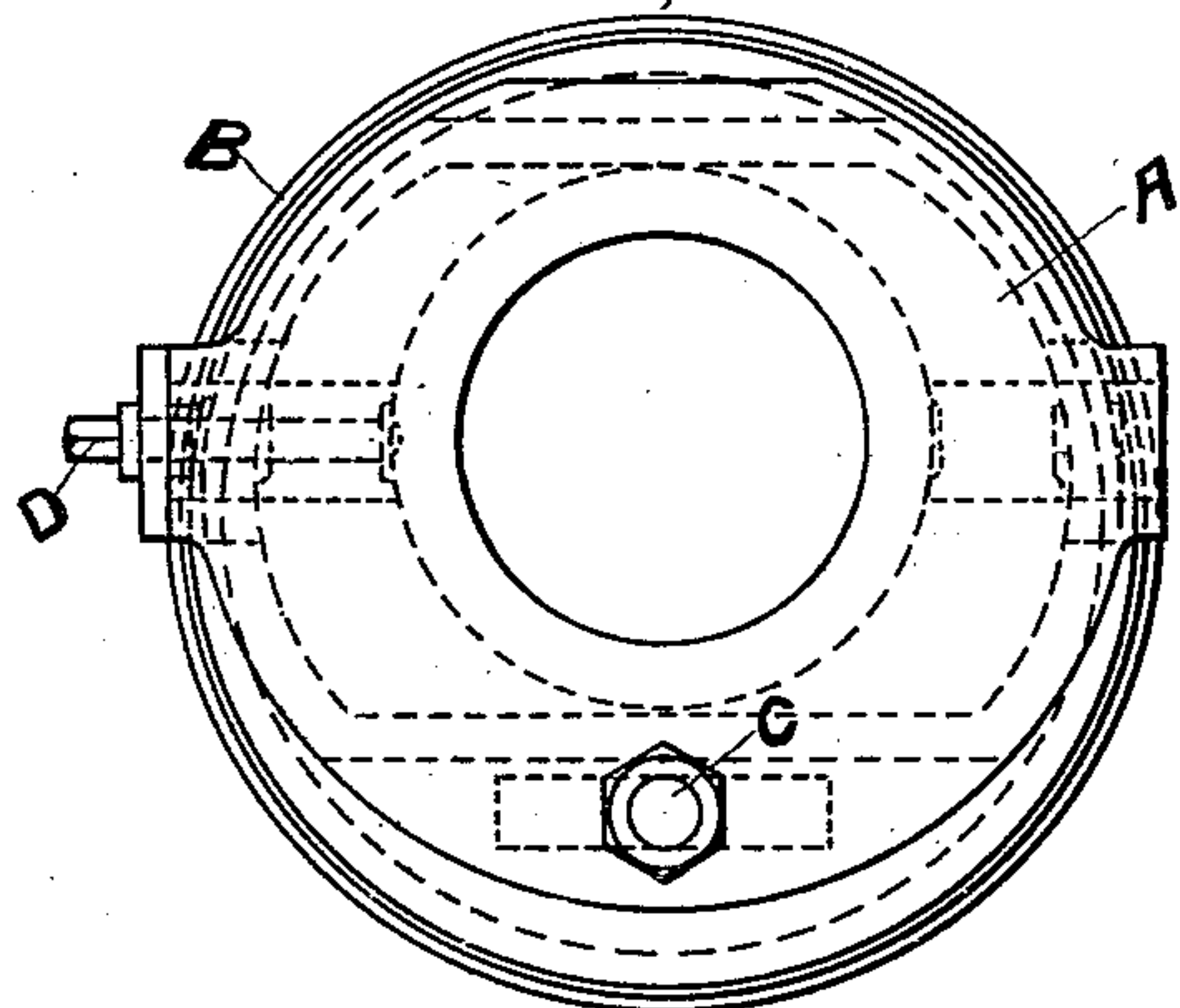


Fig. 2.

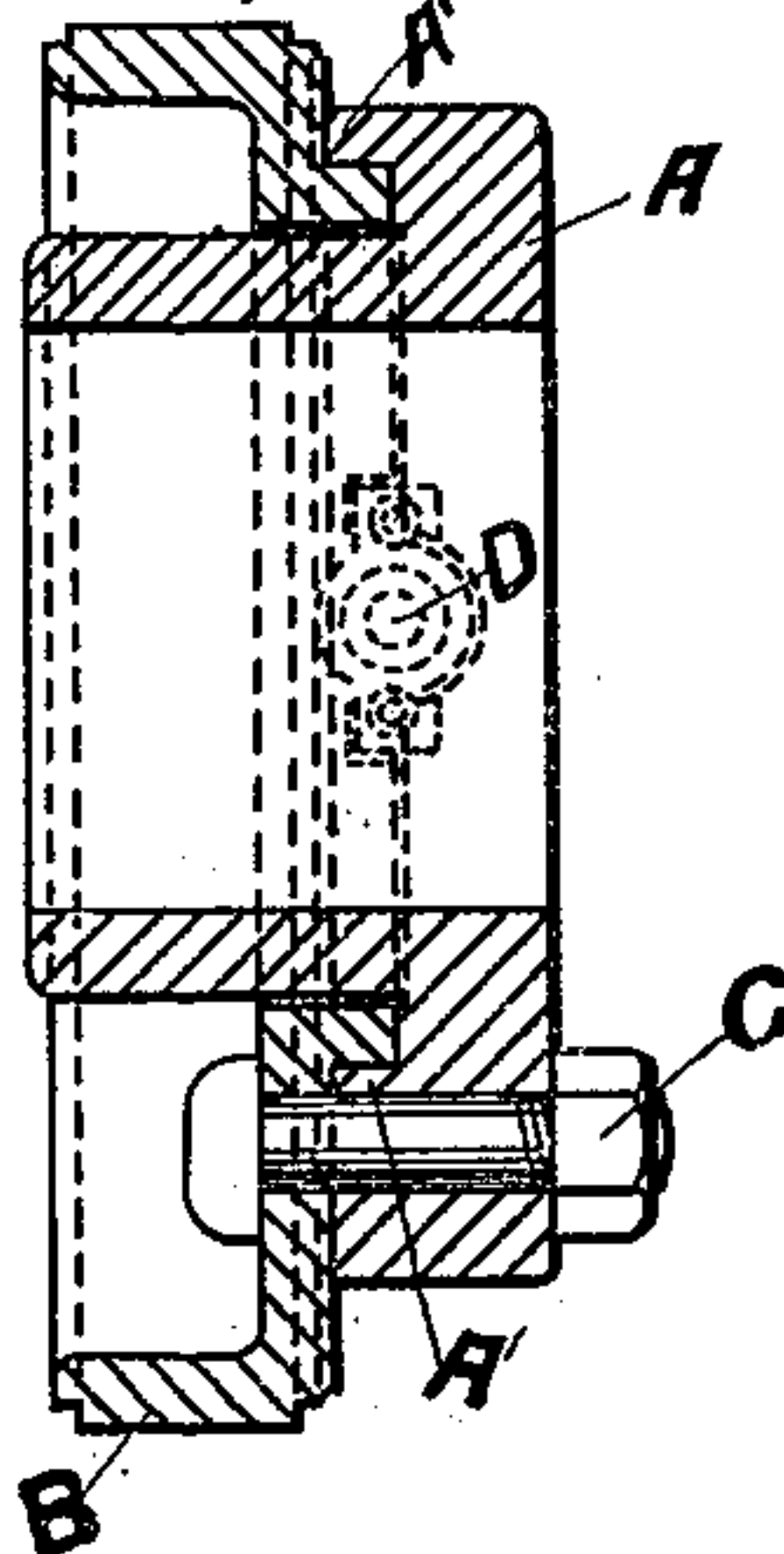
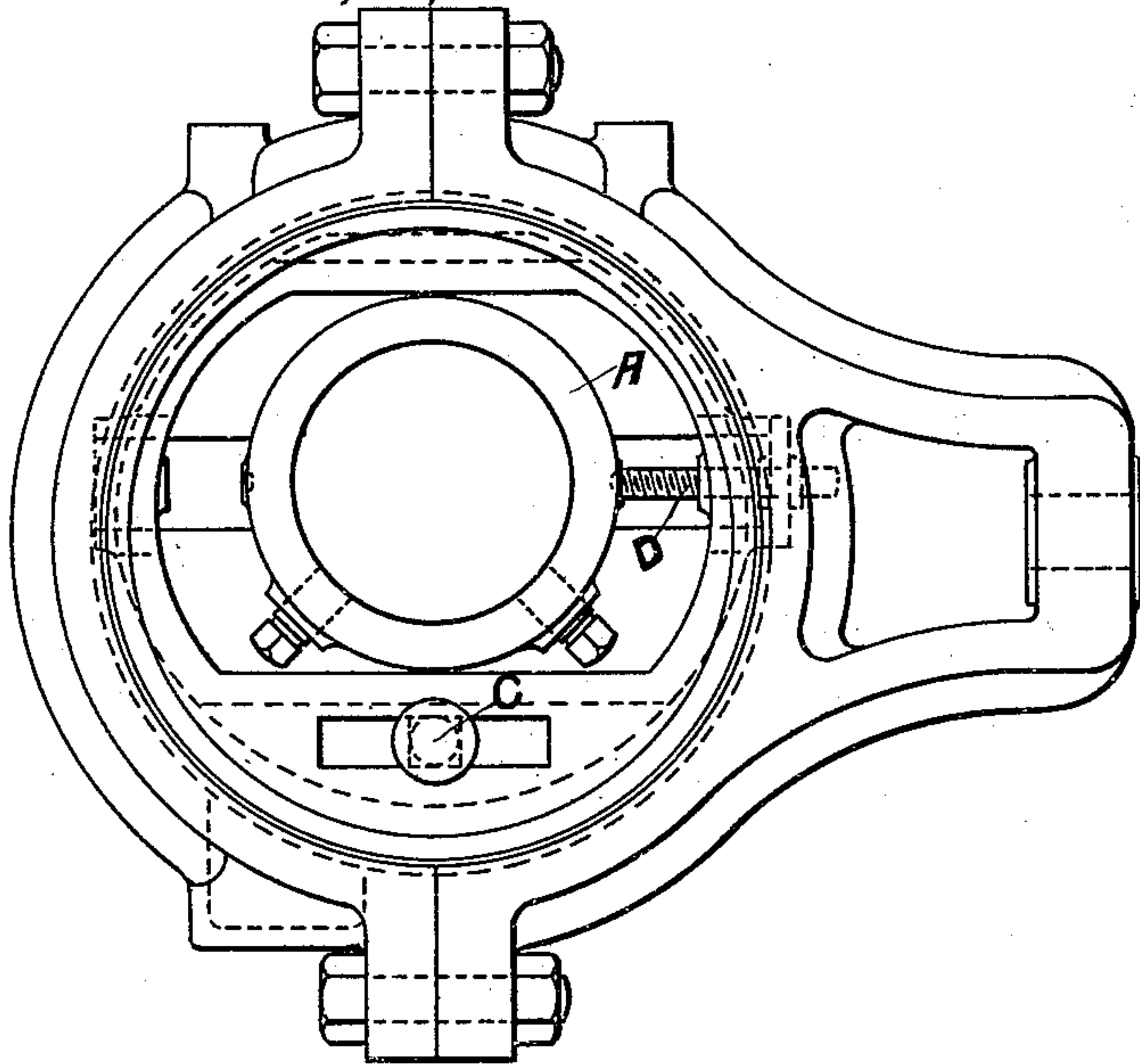


Fig. 3.



WITNESSES

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Henry Church

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Fig. 4.

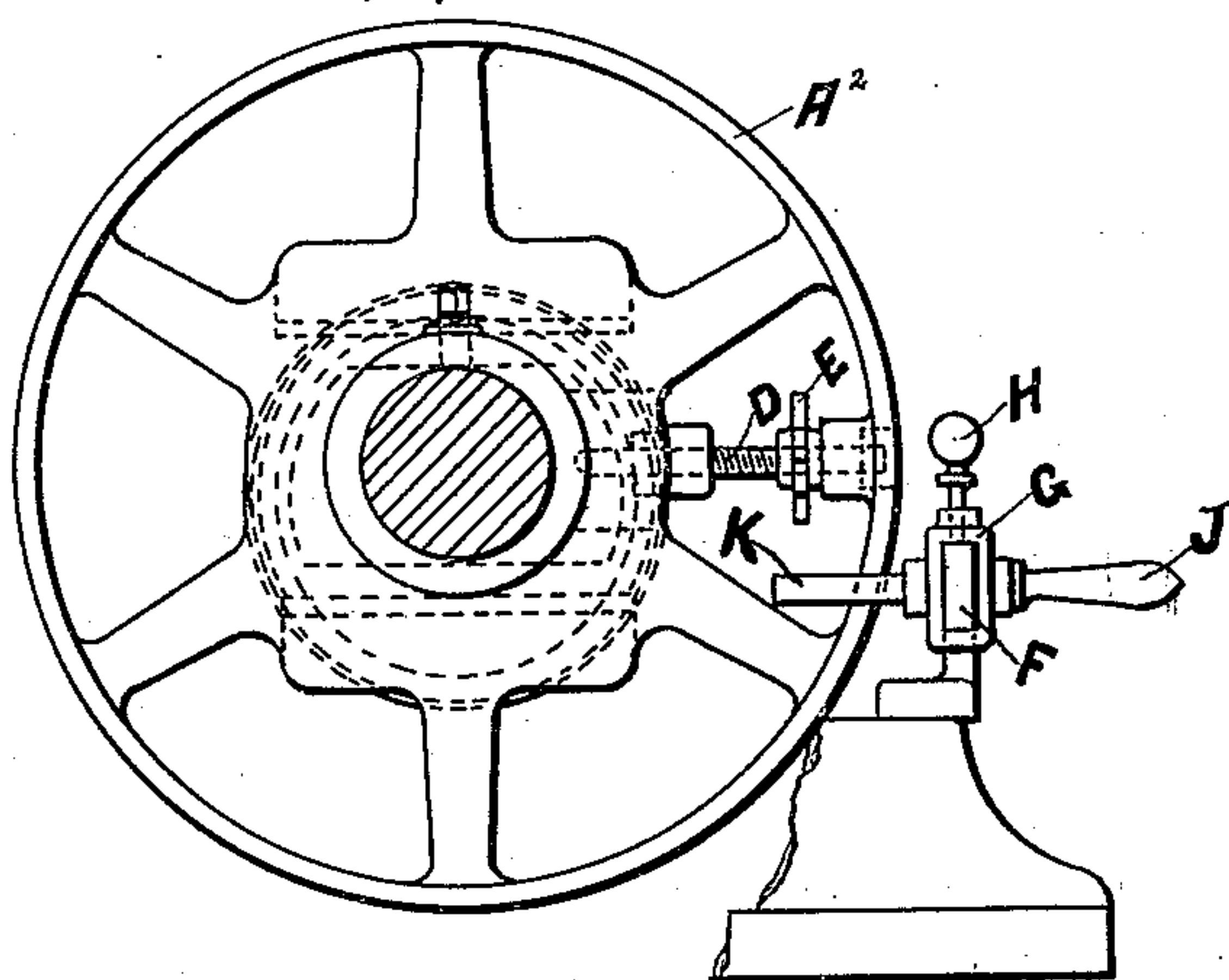
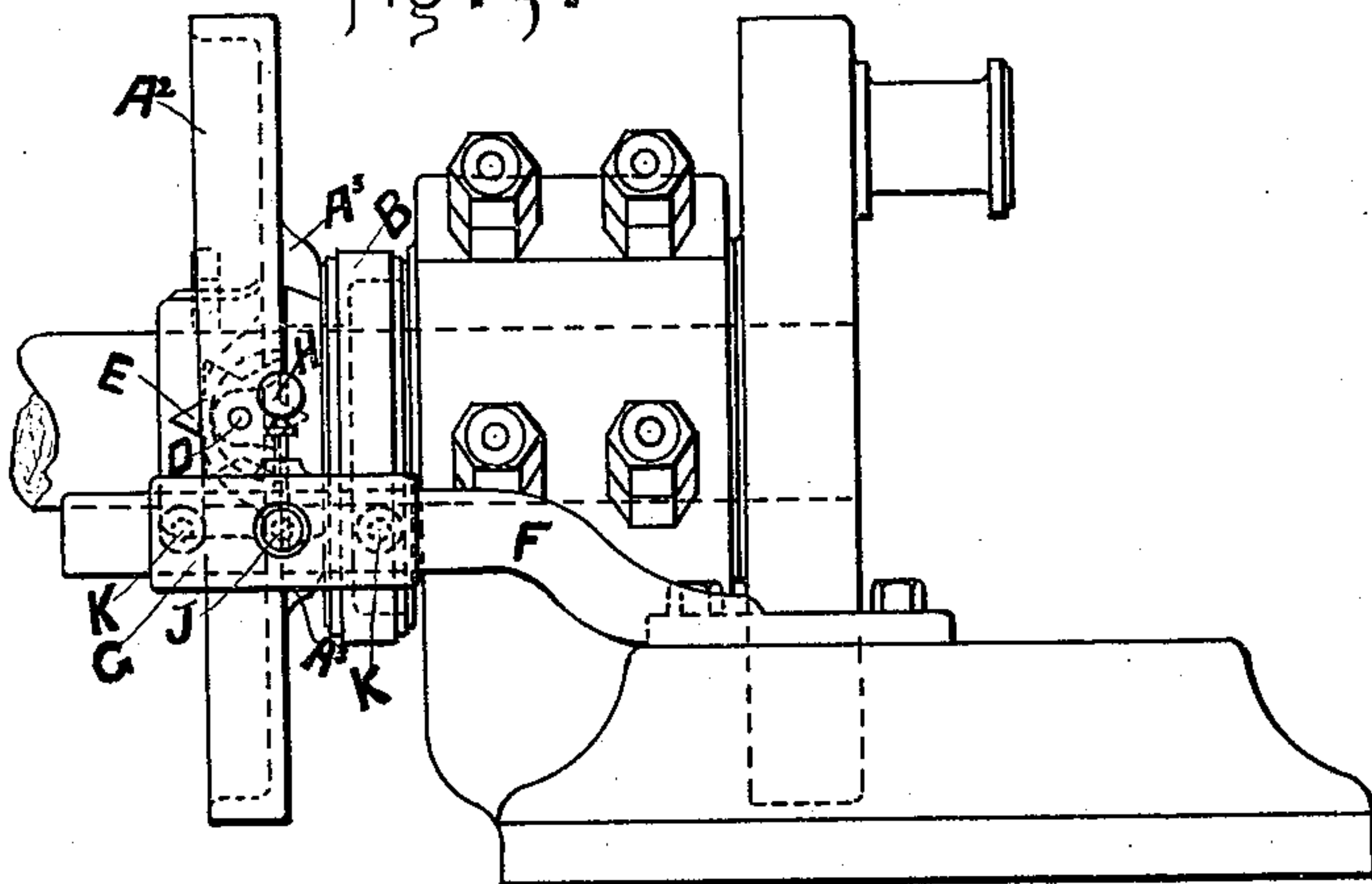


Fig. 5.



WITNESSES

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UNITED STATES PATENT OFFICE.

JOHN DICK, OF MEADVILLE, PENNSYLVANIA.

VALVE-GEAR.

SPECIFICATION forming part of Letters Patent No. 329,891, dated November 10, 1885.

Application filed May 4, 1885. Serial No. 164,323. (No model.)

To all whom it may concern:

Be it known that I, JOHN DICK, of Meadville, State of Pennsylvania, have invented certain new and useful Improvements in Valve-Gear for Steam-Engines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation of the flange-plate fastened on the crank-shaft and carrying the adjustable eccentric. Fig. 2 is a sectional end elevation of the flange-plate and adjustable eccentric. Fig. 3 is a side elevation of the adjustable eccentric and strap as fixed on the carrying flange plate secured on crank-shaft. Fig. 4 is a side elevation of the eccentric carried on a wheel with adjustable device for altering the cut-off when at work. Fig. 5 is an end elevation showing the wheel carrying the eccentric on engine crank-shaft. Like letters indicate like parts in all the figures.

My invention relates to that class of steam-engines having one ordinary slide-valve worked by a single eccentric the cut-off of which is in accordance with the amount of lap placed on the valve. Heretofore to alter the point of cut-off in a single-valve engine it is requisite to take off the valve-box cover and add or diminish the lap on the valve.

The object of my invention is to make an adjustable cut-off engine by the use of one eccentric and one valve, instead of the additional use of an extra valve, stuffing-box, and eccentric connections requisite to work a cut-off valve in a steam-engine, and to further provide for allowing the cut-off to be adjustable when the engine is at work.

In embodying my invention I employ the following instrumentalities. Referring to the drawings, A represents the flange plate or wheel fastened on crank-shaft for carrying the eccentric and on which it is moved. B is the eccentric, which is loose on the shaft and made to slide in a horizontal line between the projections A', and which is fastened to the flange-

plate by the bolt C. The eccentric is moved across the face of the flange-plate by means of the screw D. When it is desired to change the point of cut off, the bolt C is loosened, and by turning the screw D the eccentric can be moved across the shaft. The same operation is performed by eccentric being held in position without the bolt C in the wheel A² by the dovetailed slides A³, and to provide means for moving the screw the star-wheel E is fastened on the screw D, the arm F projecting from the engine-bed for the purpose of supporting the slide G. The pin H is placed in the slide G for the purpose of holding the slide in its place. The handle J, by which the slide is moved, and the two pins K, fastened in slide G, are for the purpose of operating the star-wheel secured to the screw for moving the eccentric across the shaft.

In this device the pin H must be raised and the handle J taken hold of, so that the slide can be moved and either of the pins K brought in contact with star-wheel E, which will turn the screw in wheel A² and move the eccentric in a horizontal line across the shaft in either direction.

When the slide G is moved to the central position, both pins K will be thrown out of contact with the star-wheel E, and the pin H will keep the slide from moving out of position, and the screw D will hold the eccentric in position when at work.

Having described my invention, I claim and desire to secure by Letters Patent of the United States—

In a steam-engine valve-gear, the combination of the wheel A², fastened on the crank-shaft and provided with the dovetailed projections A³, with the eccentric, the screw D, provided with the star-wheel E, the slide G, pin H, handle J, the pins K, and the arm F, projecting from the engine-frame, substantially as shown and described.

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

JOHN DICK.

Witnesses:

HENRY CHURCH,
THOS. SHIPLEY.