

(No Model.)

C. JOHNSON.

ECCENTRIC.

No. 287,440.

Patented Oct. 30, 1883.

Fig. 1.

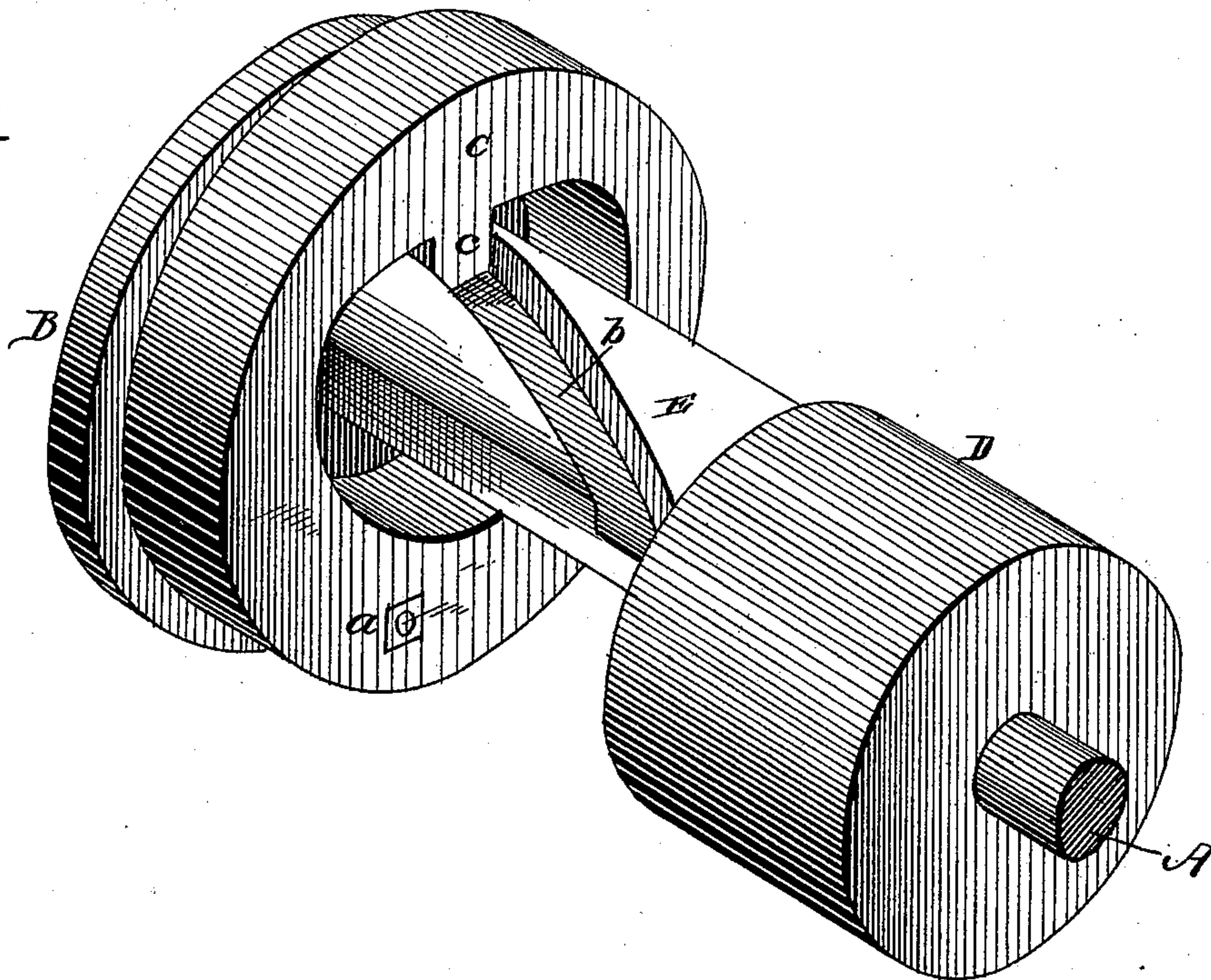
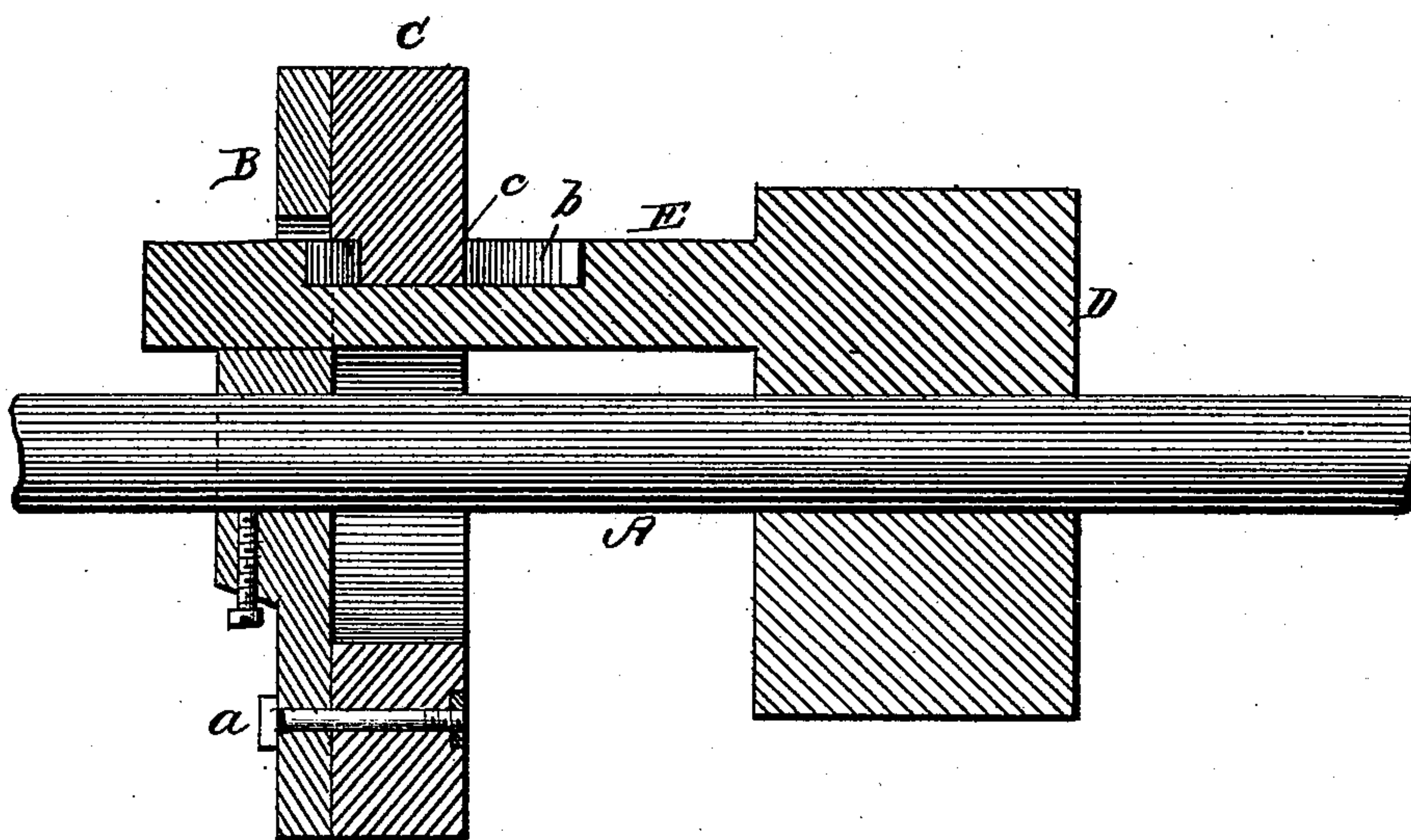


Fig. 2.



WITNESSES

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ECCENTRIC.

SPECIFICATION forming part of Letters Patent No. 287,440, dated October 30, 1883.

Application filed September 6, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES JOHNSON, a citizen of the United States, residing at Union City, in the county of Branch and State of Michigan, have invented certain new and useful Improvements in Eccentrics; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a perspective view of my invention, and Fig. 2 a longitudinal vertical section of the same.

This invention relates to certain new and useful improvements in eccentrics for steam-engines, and has for its object to improve the construction of this class of devices, whereby the movement across the shaft will be on the line of a circle, thus giving proper lead to the valve in running the engine either way, according to the power required, and which, when brought upon the center, will close said valve and shut off steam from the cylinder, thereby stopping the engine, a saving in steam being effected by the proper adjustment of the eccentric in relation to the amount of power requisite. These objects I attain by the construction substantially as shown in the accompanying drawings and hereinafter described and claimed.

In the drawings, A represents a shaft having rigidly secured thereto a flange or disk, B, to which is pivotally fastened the eccentric-block C, as shown at *a*.

Working on the shaft A is a loose hub, D, having formed therewith a pin, E, provided with a diagonal groove, *b*, in which works a projection, *c*, depending from a cam-shaped opening in the eccentric-block C, said pin E sliding through this opening, and also through a suitable opening in the flange B, as the loose hub is moved forward or backward upon the shaft.

Though I have described the pin E as being formed with a groove, if desired a rib may be employed in place thereof, and should such be the case, instead of the opening in the eccen-

tric-block being provided with a projection, as at present constructed, a groove would be made therein to engage the rib upon the pin.

The hub D is intended to be connected to a suitable lever, by which it is moved forward or backward upon the shaft, according to the direction in which it is desired to run the engine, steam being let on in proportion to the adjustment of the eccentric. By having the eccentric-block adapted to move in the line of a circle, a more gradual and certain adjustment is effected, and in reversing or stopping the engine no jar is occasioned, thereby realizing a saving in steam, and preventing the delicate parts of said engine from becoming broken or dislocated by a sudden stopping off or reversing.

Having now fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, with an eccentric, of means, substantially as shown and described, whereby the longitudinal movement of a device along the shaft will cause the eccentric to move across the shaft in the line of a circle, for the purpose set forth.

2. The eccentric for steam-engines herein described, having its block pivotally connected to a flange rigidly secured upon a shaft, and a loose hub working upon said shaft, and provided with a pin adapted to engage the flange and block, substantially as and for the purpose specified.

3. The combination, with a flange rigidly connected to a shaft, and provided with an opening, of an eccentric-block pivotally secured thereto, and constructed with a cam-shaped opening having a projection or groove, and an adjustable hub formed with a grooved or ribbed pin adapted to engage the flange and block, substantially as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

CHARLES JOHNSON.

Witnesses:

CHAS. F. ALLEN,
EDWARD H. HURD.