

(No Model.)

P. L. KIMBALL.
ROTARY SHAFT BEARING.

No. 575,481.

Patented Jan. 19, 1897.

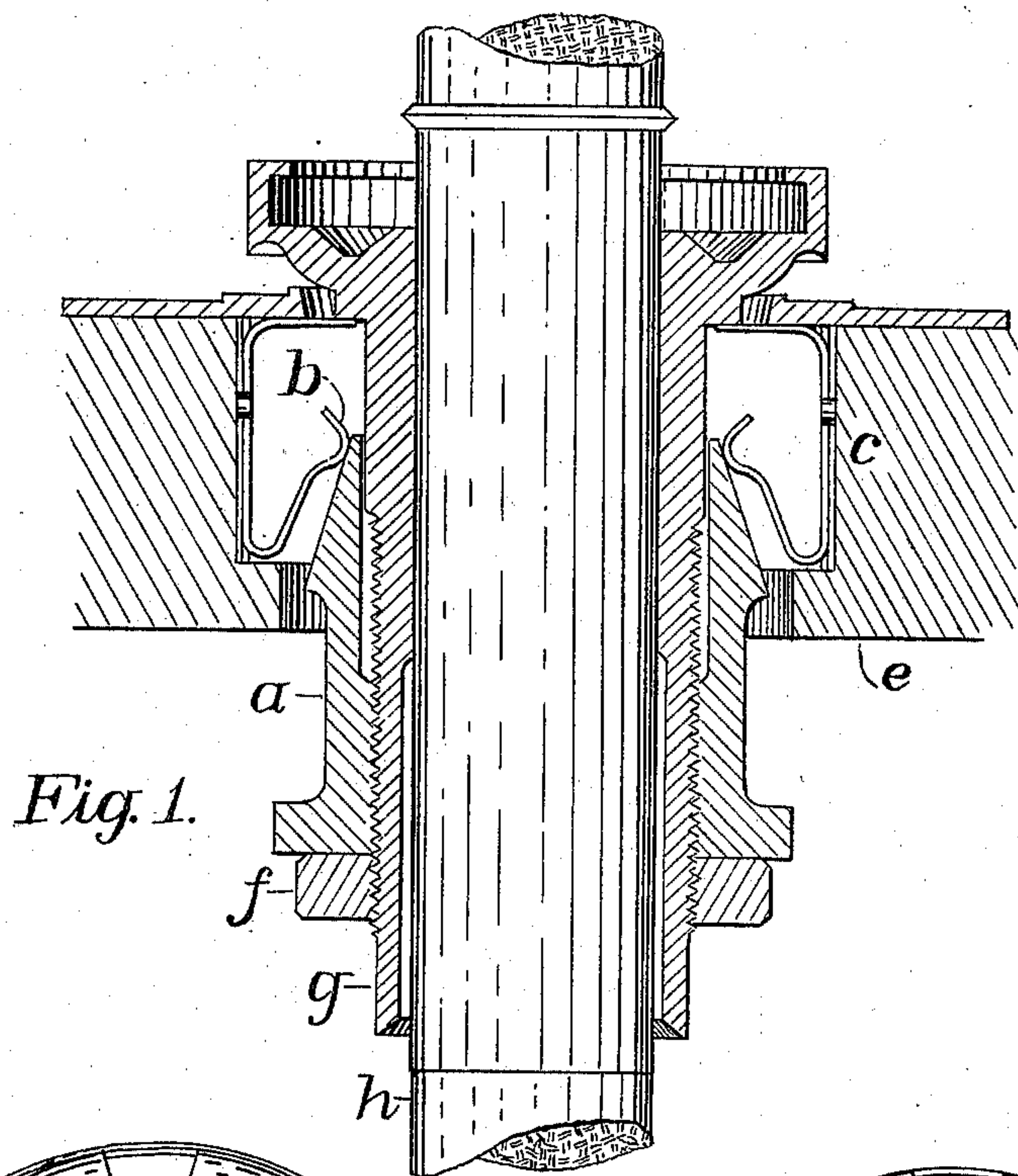


Fig. 1.

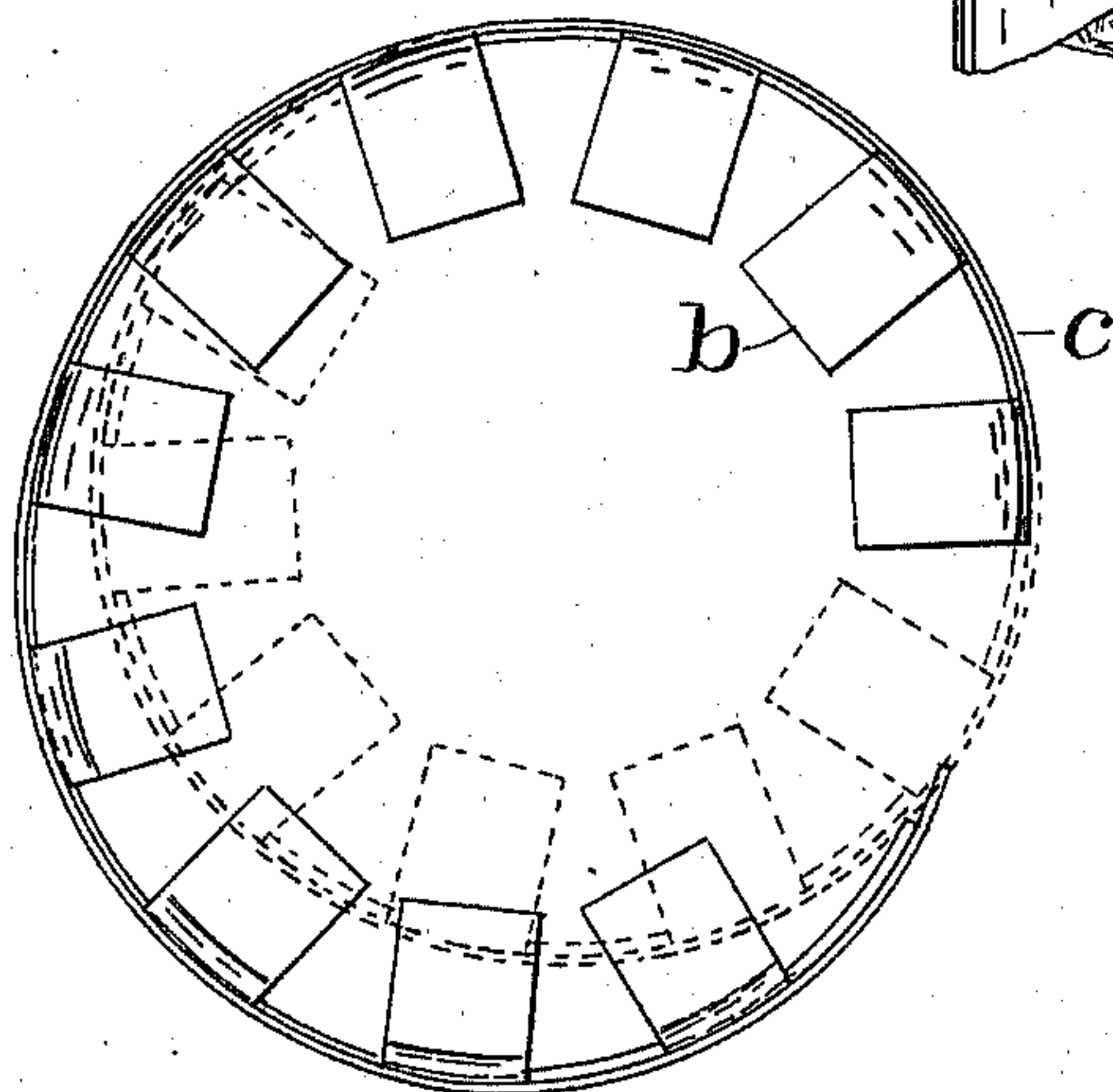


Fig. 2.

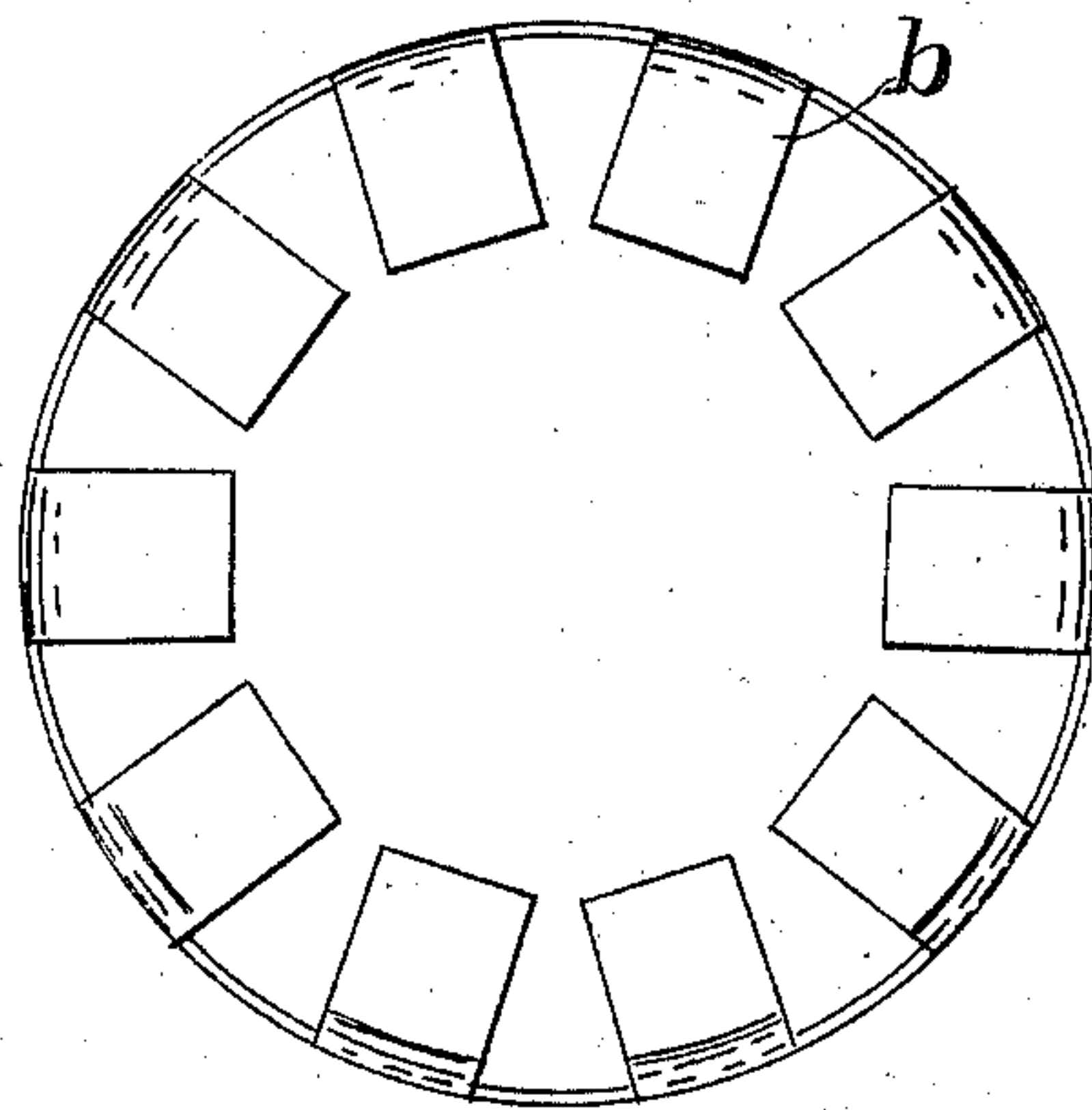


Fig. 3.

Witnesses
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ROTARY-SHAFT BEARING.

SPECIFICATION forming part of Letters Patent No. 575,481, dated January 19, 1897.

Application filed November 23, 1896. Serial No. 613,095. (No model.)

To all whom it may concern:

Be it known that I, PERLEY L. KIMBALL, a citizen of the United States of America, residing at Bellows Falls, in the county of Windham and State of Vermont, have invented a certain new and useful Improvement in Rotary-Shaft Bearings, of which the following is a description, reference being had to the accompanying drawings, wherein—

Figure 1 is a view in central vertical section, except as to the rotary shaft. Fig. 2 is a top view of the series of springs made use of represented as connected to a spring-base which is a separate piece. Fig. 3 is a top view of the series of springs made use of represented as integral with the spring-base.

The object of the improvement is to provide a bearing for a rotatory shaft which shall support it in alinement with all necessary strength, but yet allow it some latitude for vibration and at the same time be provided with means for adjusting the force or strength with which the bearing tends to hold the shaft in one particular alinement. One use of such a bearing is to support the shaft or spindle of a centrifugal separator, which necessarily has a high speed of rotation and at the same time needs provision for certain lateral vibration of the shaft or spindle.

In the accompanying drawings the letter *h* denotes the rotatory shaft, and *g* denotes a sleeve-bearing encircling the same.

The letter *a* denotes a spring-pressure regulator, which is a sleeve encircling said sleeve-bearing *g* and connected thereto by cooperating screw-threads.

The letter *b* denotes springs in a series, made of any suitable material—spring-steel, for instance—which preferably, but not necessarily, are connected together by a common

attachment to a ring *c*. These springs bear at the back against the base *e*, and they also bear against an annular cam-like surface on the spring-pressure regulator *a*. By running this spring-pressure regulator upward the springs are made to bear with increased pressure, thereby increasing the force or strength with which they tend to hold the rotatory shaft in one certain alinement and against lateral vibration. By running this spring-pressure regulator downward the said spring-pressure is correspondingly decreased.

The letter *f* denotes a lock-nut for assisting to hold the spring-pressure regulator in place when once adjusted.

I claim as my improvement—

1. In combination, the rotatory shaft, the sleeve-bearing encircling said shaft, the spring-pressure regulator encircling said sleeve-bearing, and the springs, all substantially as described and for the purposes set forth.

2. In combination, the rotatory shaft, the sleeve-bearing encircling said shaft, the spring-pressure regulator encircling said sleeve-bearing and connected thereto by cooperating screw-threads, and the springs, all substantially as described and for the purposes set forth.

3. In combination, the rotatory shaft, the sleeve-bearing encircling said shaft, the spring-pressure regulator, encircling said sleeve-bearing, the lock-nut, and the springs, all substantially as described and for the purposes set forth.

PERLEY L. KIMBALL.

Witnesses:

FRANK G. DAY,
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