

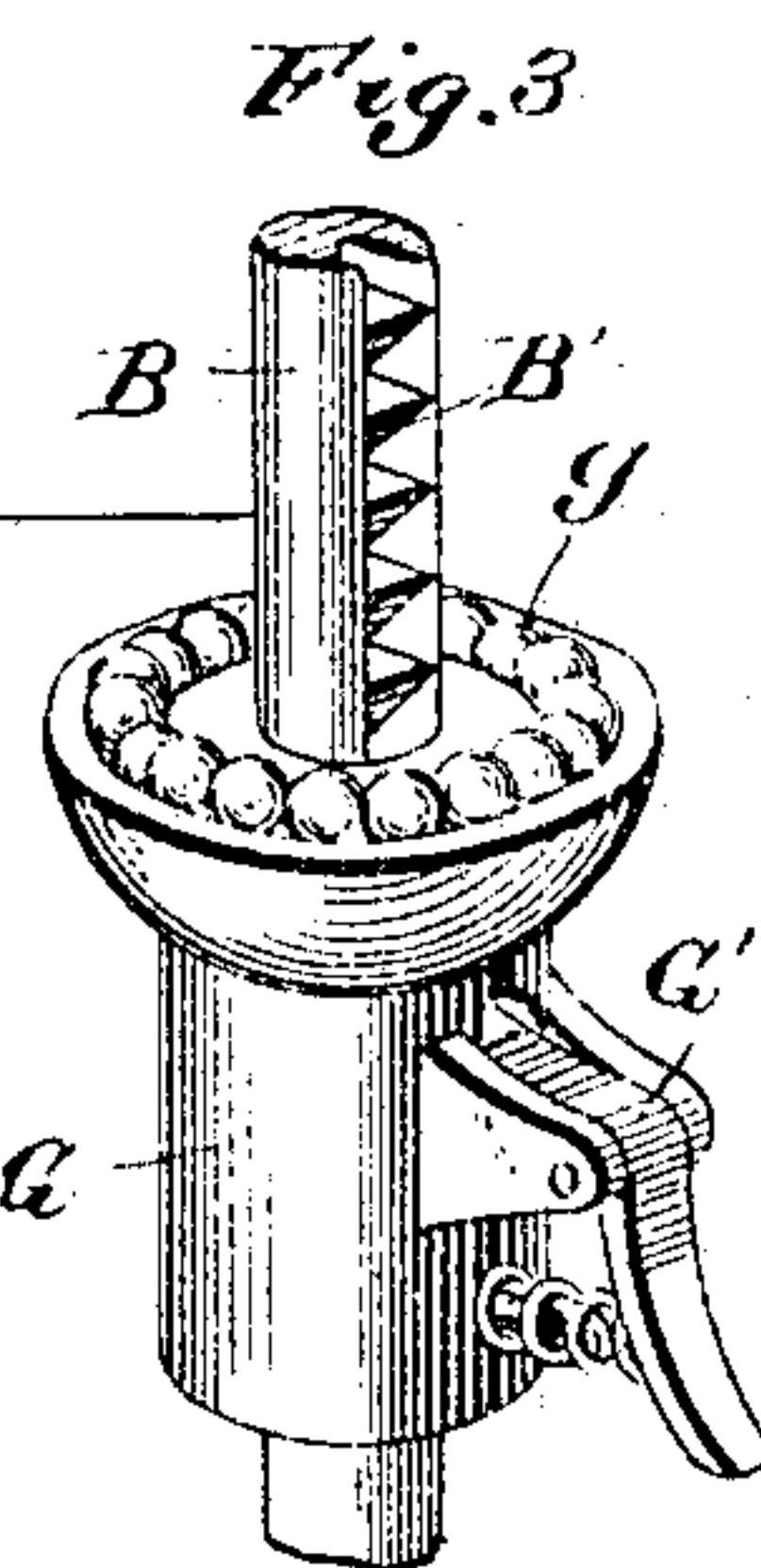
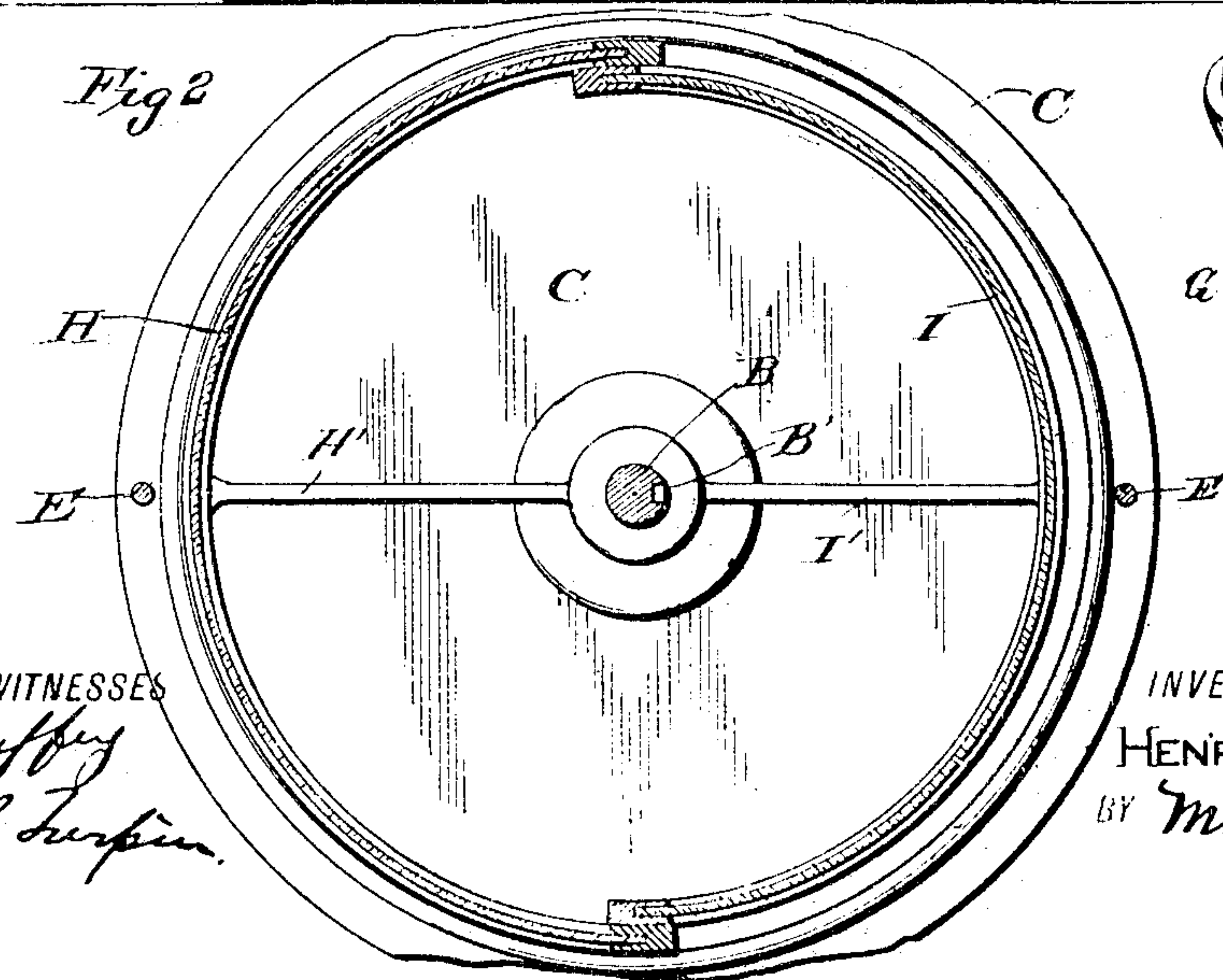
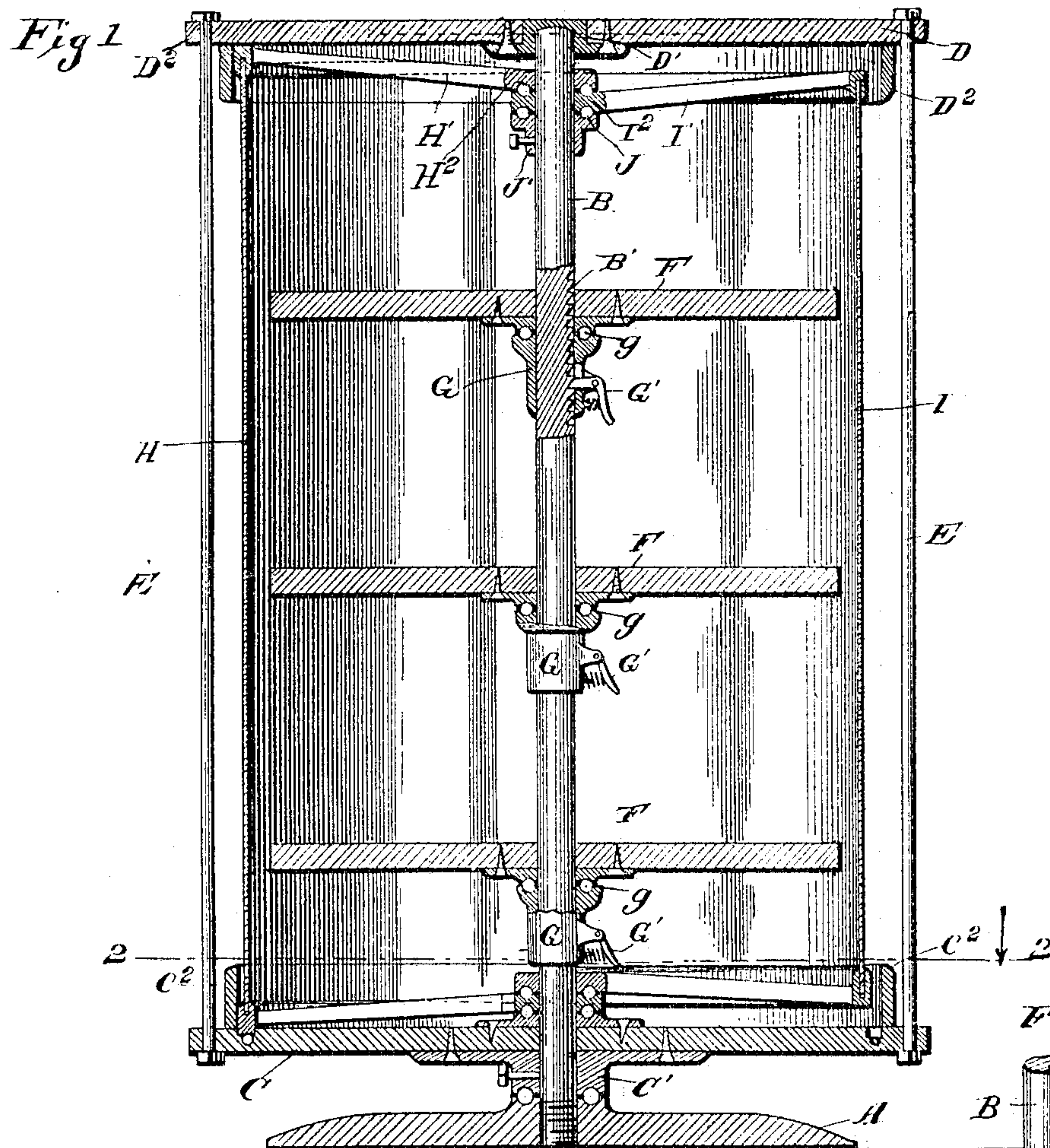
No. 799,233.

PATENTED SEPT. 12, 1905.

H. E. HUBBELL.

BOOKCASE.

APPLICATION FILED DEC. 20, 1904.



WITNESSES
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UNITED STATES PATENT OFFICE.

HENRY E. HUBBELL, OF JOHNSON, VERMONT.

BOOKCASE.

No. 799,233.

Specification of Letters Patent.

Patented Sept. 12, 1905.

Application filed December 20, 1904. Serial No. 237,603.

To all whom it may concern:

Be it known that I, HENRY E. HUBBELL, a citizen of the United States, residing at Johnson, in the county of Lamoille and State of Vermont, have made certain new and useful Improvements in Bookcases, of which the following is a specification.

My invention is an improvement in cases adapted for holding books or merchandise or the like; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a sectional elevation of a case embodying my invention. Fig. 2 is a cross-section on about line 2 2 of Fig. 1, and Fig. 3 is a detail perspective view showing a portion of the upright and one of the bearings thereon for the shelves.

In carrying out my invention I provide a base A, on which is mounted the upright or standard B, made of suitable length to extend through the main frame of the case and to support the same at its upper end. The main frame of the case comprises, as shown, a bottom plate C, a top plate D, and connections E between said plates C and D. These connections may preferably be in the form of rods, as shown. The upper plate D is provided at its center with a bearing D', resting on the upper end of the upright B, and the bottom plate C is supported on ball-bearings C' from the base A, so the main frame can be readily revolved when desired. Shelves F are supported on the shaft B and are preferably arranged for adjustment up and down, so they may be set to different positions relatively. I prefer to adjust the shelves independently and to secure this adjustment by the means shown, which includes supports G, encircling and movable longitudinally along the upright B and having means for securing them in suitable adjustment. This is shown as comprising ratchet-teeth B' in the upright B and pawls G', carried by the shelf-supports G and engaging with the ratchets B' to hold the shelves in different adjustments. By this means the shelves may be adjusted up and down independently and may be supported in any desired position. In their upper ends the supports G are provided with races for balls g, so the shelves are supported by ball-bearings to facilitate their ready turning in the use of the invention. It will thus be noticed I provide a main frame which can be revolved about the central upright and also shelves which can be revolved inde-

pendently of each other and of the main frame upon the central upright and can be adjusted up and down along the upright and held in any suitable position.

In connection with the shelves and the main frame I provide a door, which preferably consists of two semicylindrical sections H and I, the latter being slightly smaller than the former and arranged to turn therein when desired. These doors revolve within circular flanges D² and C², projecting, respectively, from the under and upper sides of the plates D and C and excluding from view and protecting the opposite ends of the door-sections. The door-sections, which may be provided with curved plates of glass to expose the contents of the case or may be constructed of other suitable material, as desired, are supported by arms H' and I', connected at their outer ends with their respective door-sections and having at their inner ends bearing portions mounted on ball-bearings. As shown, balls J are arranged in a suitable race J' below the bearing I² at the inner end of the arm I', and the upper side of said bearing I² is provided with a ball-race receiving balls, upon which rests the bearing H² at the inner end of the arm H'. This describes the construction for supporting the inner ends of the upper arms H' and I'. The inner ends of the lower arms supporting the door-section are similarly constructed, it being understood that the door-supporting arms are provided at their inner ends with bearing-rings fitting around the upright B, one above the other, balls being interposed between the said bearings and below the lower one of the said bearings in both the upper and lower construction for supporting the door-sections.

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

1. The improvement in bookcases herein described, comprising the base, the upright thereon, the main frame having a top plate resting on the upper end of the upright, and a lower plate connected with the top plate, ball-bearings below the bottom plate, the shelves encircling the upright and adjustable longitudinally along the same, supports below the shelves and provided with ball-races and balls therein supporting their respective shelves, means for securing these supports in different positions along the upright, door-sections operating between the upper and lower plates of the main frame, arms con-

5 nected with the door-sections and provided at their inner ends with bearing-rings encircling the upright, one above the other, balls between the upper and lower bearing-rings, and a support below the lower ring and provided with balls forming a bearing for the said lower ring, substantially as set forth.

10 2. A case substantially as described, comprising a base, an upright on the base, a main frame supported by said base and upright, and adapted to revolve thereon, and shelves supported on the upright and adapted to be revolved thereon and for adjustment longitudinally along the upright to different positions, and means for supporting the shelves in any suitable adjustment longitudinally along the upright, substantially as set forth.

15 3. The combination substantially as herein described, with the upright and shelves supported thereon, of the door-sections, arms

20 connected at their outer ends with said sections and provided at their inner ends with bearing-rings encircling the upright, one above the other, balls between the upper and lower bearing-rings, and the support below the lower ring and balls between said support and such ring, substantially as set forth.

4. The combination with an upright having ratchet-teeth and a shelf movable along the upright and adapted to revolve thereon, of a support below the shelf and a pawl carried by the support and engaging the ratchet-teeth of the upright, substantially as set forth.

HENRY E. HUBBELL.

Witnesses:

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