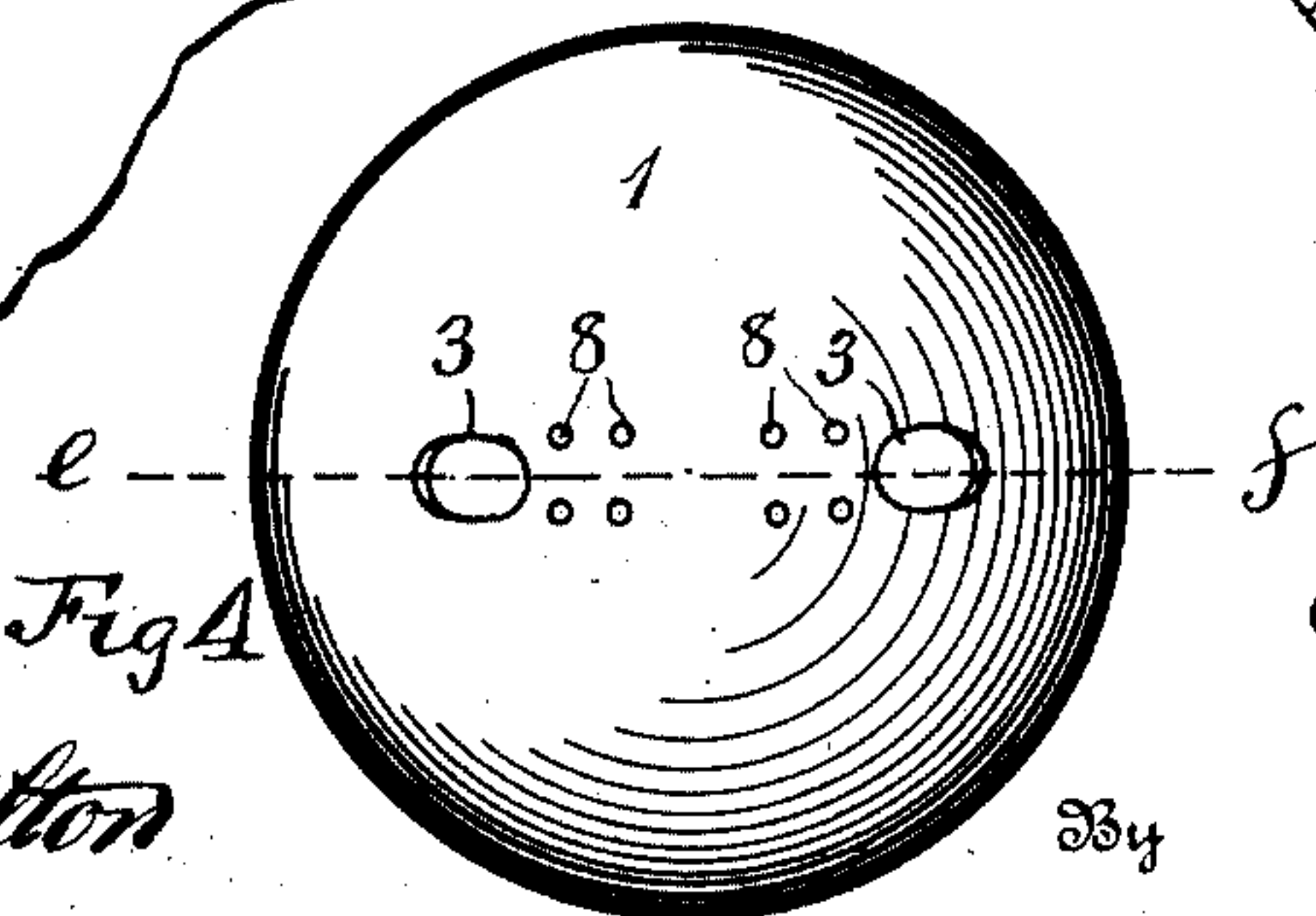
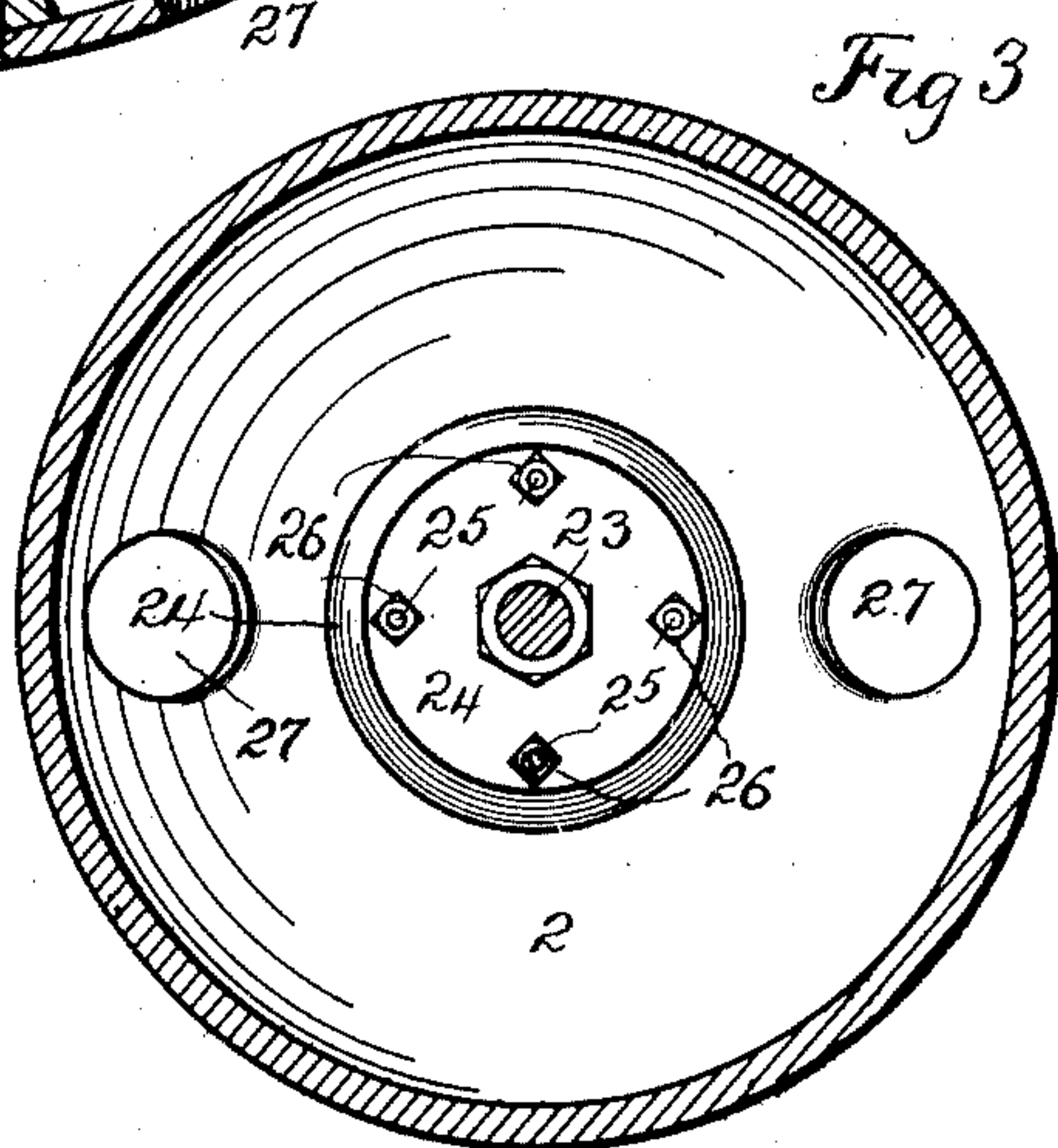
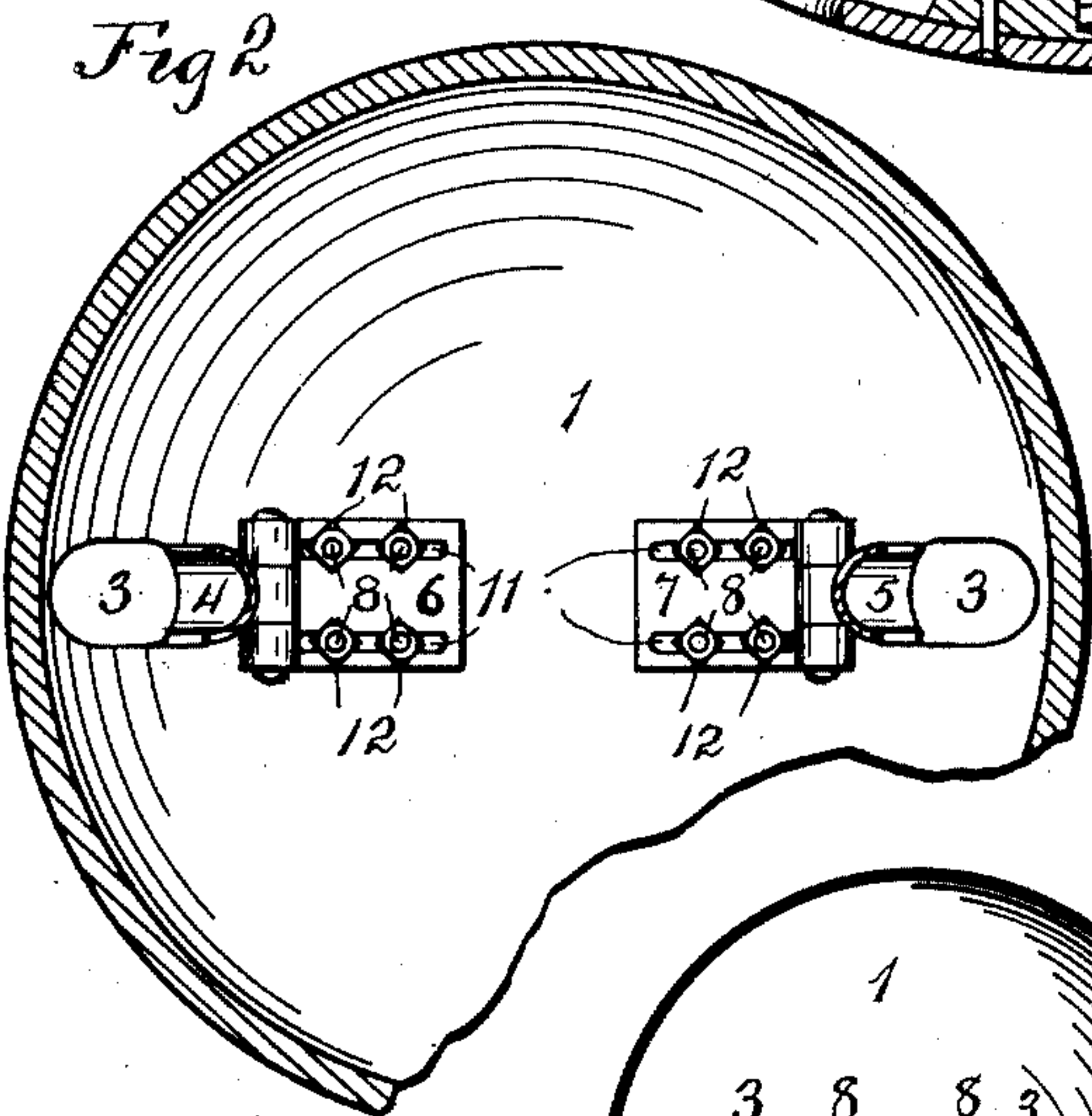
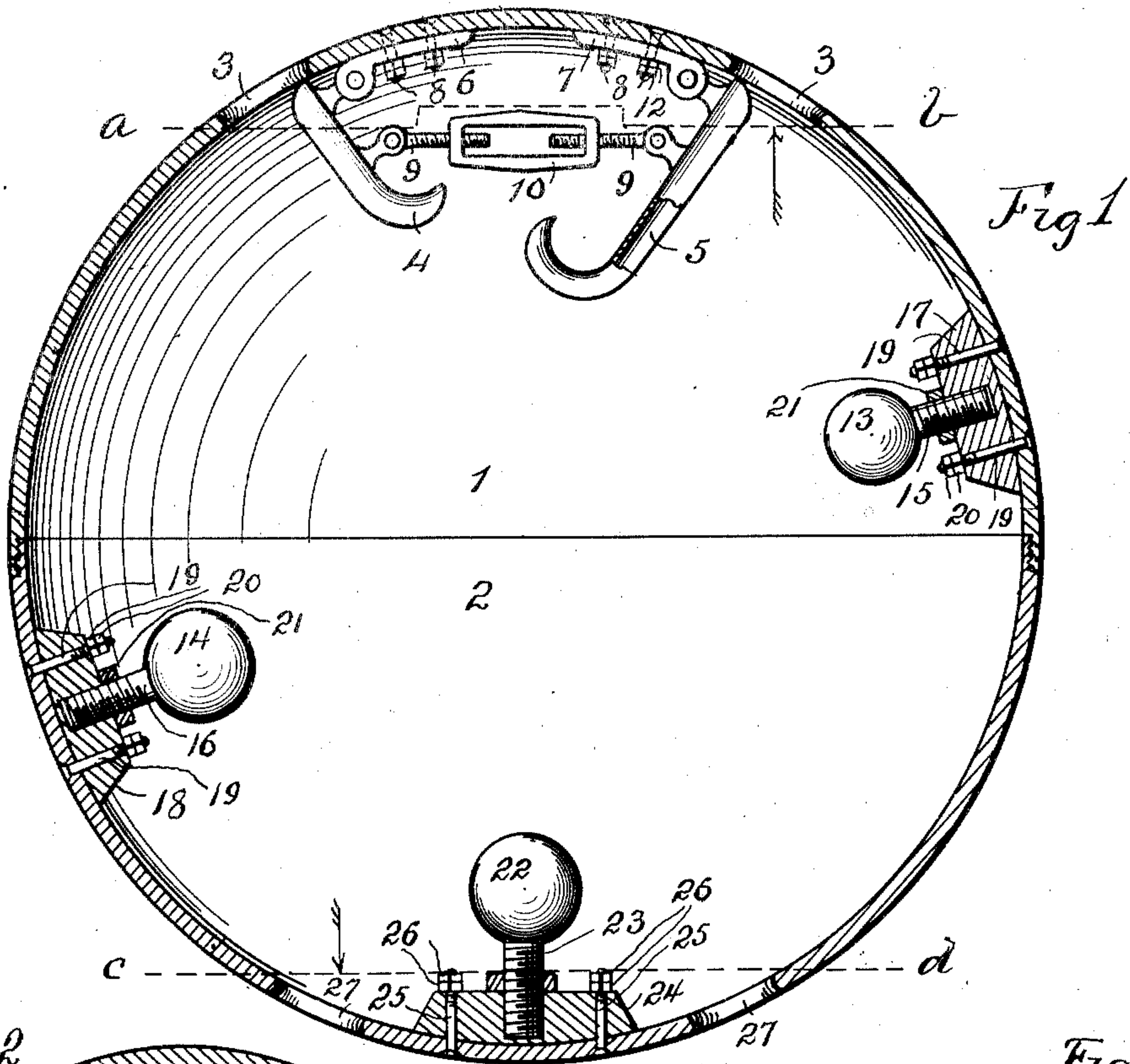


No. 864,745.

PATENTED AUG. 27, 1907.

E. A. SCHENCK.  
BOWLING BALL.

APPLICATION FILED JAN. 30, 1906.



Witnesses:

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By

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# UNITED STATES PATENT OFFICE.

EUGENE A. SCHENCK, OF KANSAS CITY, KANSAS.

## BOWLING-BALL.

No. 864,745.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed January 30, 1906. Serial No. 298,616.

*To all whom it may concern:*

Be it known that I, EUGENE A. SCHENCK, a citizen of the United States, residing at Kansas City, in the county of Wyandotte and State of Kansas, have invented new and useful Improvements in Bowling-Balls, of which the following is a specification.

My invention relates to improvements in bowling balls.

My invention provides a bowling ball having peripheral holes for the insertion of the fingers, and finger holds intermediate said holes and adjustable to different positions at the convenience of the bowler.

My invention provides further, adjustable means for counterbalancing the finger holds.

My invention provides further, adjustable means for varying the center of gravity of a bowling ball so that the ball may be deflected in a curvilinear manner corresponding to the "English" imparted to a billiard ball.

My invention provides further, a hollow bowling ball comprising two detachable hemispheres, the shell of the ball being provided with two holes for the insertion of the fingers and two finger holds intermediate said holes and adjustable toward and from each other, and adjustable means for counterbalancing the weight of the finger holds.

Other novel features of my invention are hereinafter fully described and claimed.

In the accompanying drawings illustrating the invention—Figure 1 is a diametrical sectional view, on the dotted line *e-f* of Fig. 4. Fig. 2 is a horizontal sectional view taken on the dotted line *a-b* of Fig. 1. Fig. 3 is a horizontal sectional view taken on the dotted line *c-d* of Fig. 1. Fig. 4 is a top view of the ball.

Similar characters of reference denote similar parts.

In its preferable form, the bowling ball comprises a hollow sphere consisting of two hollow hemispheres 1 and 2, the end of one hemisphere being externally screw threaded and fitted to the internally screw threaded adjacent end of the other hemisphere. The hemisphere 1 is provided with two peripheral finger holes 3 to receive the thumb and one of the other fingers of the bowler. Intermediate the holes 3 are two inwardly extending curved finger holds 4 and 5, the inner ends of which are pivoted respectively to two finger hold supports 6 and 7, secured by bolts 8 to the inner wall of the hemisphere 1. To the inner side of each finger hold 4 and 5 is pivotally connected the outer end of a screw threaded rod 9 the inner end of which is fitted to a screw threaded hole provided in the adjacent end of a turn buckle 10, rotatively mounted on the two rods 9. The rods 9 are oppositely screw threaded so that by rotating the turn buckle 10 to and fro the finger holds 4 and 5 may be swung toward and from each other to positions suiting the convenience of the bowler. The supports 6 and 7 are provided each with two longitudinal slots 11 in each of which slots are

disposed two bolts 8 the inner ends of which are provided each with two nuts 12. The outer nuts 12 are clamped firmly against the inner sides of the supports 6 and 7 respectively, the inner nuts 12 serving as lock nuts. Two diametrically opposite counter-weights 13 and 14 respectively, are provided with screw threaded radial stems 15 and 16, which are fitted respectively in screw threaded holes provided in the plates 17 and 18, secured respectively by means of bolts 19, to the inner sides of the hemispheres 1 and 2 respectively.

20 denotes clamping nuts mounted two upon each bolt 19, the outer of said nuts resting against the inner side respectively, of the plates 17 and 18, the inner of said nuts 20 serving as lock nuts.

21 denotes two lock nuts mounted one upon each stem 15 and 16, and bearing respectively upon the inner sides of the plates 17 and 18. By properly turning the stems 15 and 16, the weights 13 and 14 may be radially adjusted to positions properly counterbalancing the finger holds 4 and 5. Intermediate the weights 13 and 14 and diametrically opposite the finger holds 4 and 5, is a radially adjustable weight 22, provided with a radial screw threaded stem 23, rotatively fitted in a screw threaded hole provided in a plate 24, secured to the inner wall of the hemisphere 2, by four bolts 25, extending through said hemisphere and through said plate 24, and having mounted each on its inner end, two nuts 26, the outer of which rests against the plate 24 and the inner of which serves as a lock nut. After the weights 13 and 14 have been adjusted to the positions suitable for counterbalancing the finger holds 4 and 5, the weight 22 may, by being properly turned, be adjusted radially so as to vary the center of gravity of the bowling ball, as desired. By such radial adjustment of the weight 22 the center of gravity of the ball may be so located as to afford such curvilinear movement of the ball during the bowling operation, as the bowler may desire, such curvilinear movement corresponding to the "English" commonly imparted to a billiard ball.

For convenience in grasping the hemisphere 2 for the purposes of attaching the two hemispheres 1 and 2 to each other, or for detaching such hemispheres from each other, the hemisphere 2 is provided with two peripheral holes 27 disposed on diametrically opposite sides of the plate 24.

In operating my invention, the weights 13, 14 and 22 and the finger holds 4 and 5 having been adjusted in positions suiting the bowler's convenience, the ball is seized by inserting the thumb and one of the other fingers through the holes 3, the finger holds 4 and 5 being grasped respectively between the thumb and the other finger employed for the purpose. The ball is then bowled in the ordinary manner. By adjusting the turn-buckle 10 the finger holds 4 and 5 may be positioned as the bowler may desire for his convenience.



Various modifications of my invention may be made without departing from its spirit.

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

- 5 1. A bowling ball provided with two peripheral holes and two interior finger holds adjacent said holes respectively, one finger hold being adjustable in position relative to the adjacent hole.
- 10 2. A bowling ball provided with two peripheral holes and two interior finger holds adjacent said holes respectively, each finger hold being adjustable in position relative to the adjacent hole.
- 15 3. A bowling ball provided with two peripheral holes and two interior finger holds adjacent said holes respectively and pivotally mounted so as to swing toward or from each other.
- 20 4. A bowling ball provided with two peripheral holes and two interior finger holds pivotally mounted between said holes so as to be swung relative to each other, and adjustable means for locking the finger holds in the positions to which they may be adjusted.
- 25 5. A bowling ball provided with two peripheral holes, two finger hold supports adjacent said holes respectively and adjustable relative to said holes, two finger holds mounted on said supports and adjustable relative thereto and to each other, and means for releasably locking the finger holds in the positions to which they are adjusted.
- 30 6. A bowling ball provided with two peripheral holes, two finger hold supports adjacent said holes respectively and adjustable relative to said holes, and two finger holds adjustable on said supports toward and from each other.
- 35 7. A bowling ball comprising a hollow sphere having two finger holes, and two finger holds adjustable toward and from each other and secured to the inner wall of said sphere intermediate said holes.
- 40 8. A bowling ball provided with two peripheral holes, two finger holds intermediate said holes and adjustable to different positions, and adjustable means for counterbalancing the weight of said finger holds.
9. A bowling ball provided with two peripheral holes, two finger holds pivoted in said ball intermediate said

holes and provided with means for being swung to different positions, and adjustable means for counterbalancing the weight of said finger holds.

10. A bowling ball provided with two peripheral holes, two finger holds intermediate said holes and adjustable to different positions toward and from each other, and two radially adjustable diametrically opposite weights carried by the ball so as to counterbalance said finger holds.

11. A bowling ball comprising a hollow sphere, two radially adjustable diametrically opposite weights secured to the interior wall of the sphere, two finger holes in the shell of the sphere intermediate said weights, two finger holds intermediate said holes and adjustable toward and from each other, and a third radially adjustable weight intermediate said other weights and secured to the inner wall of the sphere opposite said finger holds.

12. A bowling ball comprising a hollow sphere, two radially adjustable diametrically opposite weights secured to the inner wall of the sphere, two finger holes in the shell of said sphere intermediate said weights, two finger holds pivoted to the shell intermediate said holes, adjustable means for swinging said finger holds relative to each other, and a radially adjustable weight secured to the inner wall of the sphere intermediate said other weights and opposite said finger holds.

13. A bowling ball comprising two hollow hemispheres detachably secured together to as to form a hollow sphere the shell of which is provided with two finger holes, two finger holds intermediate said holes and adjustable toward and from each other, and adjustable means for counterbalancing the weight of said finger holds.

14. A bowling ball comprising two hollow hemispheres detachably secured together to form a hollow sphere the shell of which has two holes, two finger holds intermediate said holes, means for counterbalancing the weight of said finger holds, and means for varying the position of the center of gravity of said sphere.

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

EUGENE A. SCHENCK.

Witnesses:

WARREN D. HOUSE,  
E. B. HOUSE.