

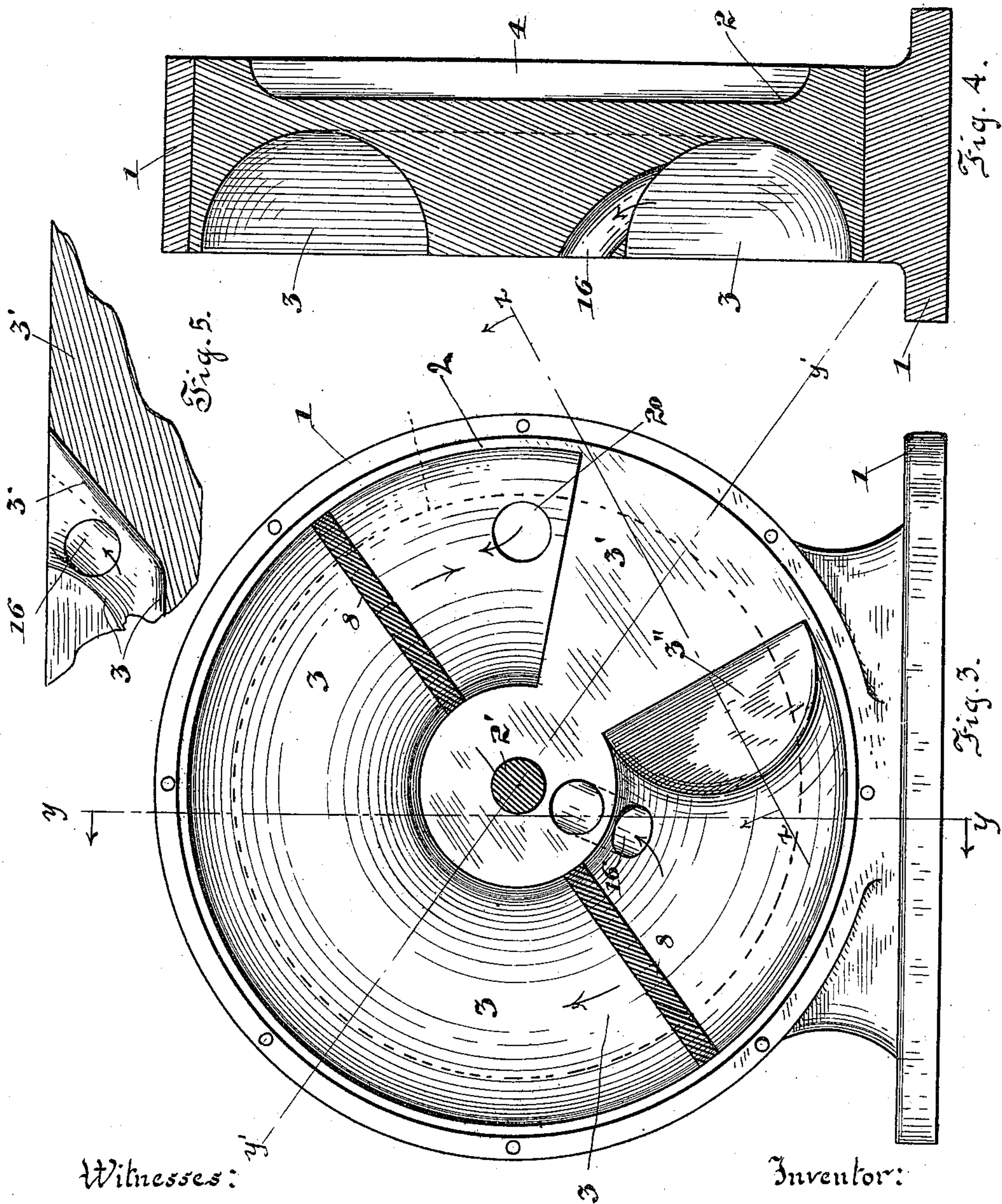
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975,643.

G. B. SEITZ.
ROTARY ENGINE.
APPLICATION FILED JAN. 15, 1910.

Patented Nov. 15, 1910.
4 SHEETS—SHEET 2.



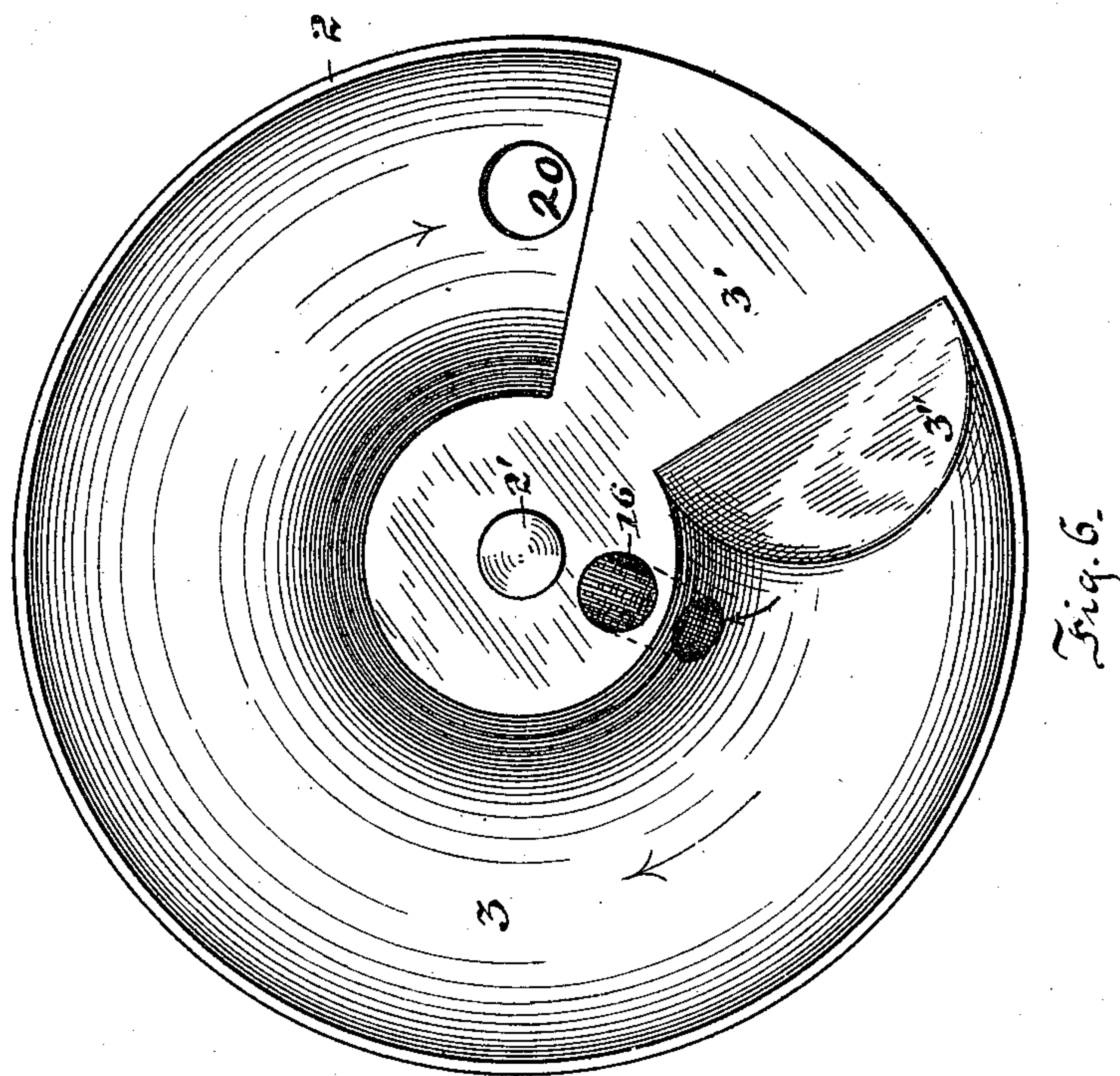
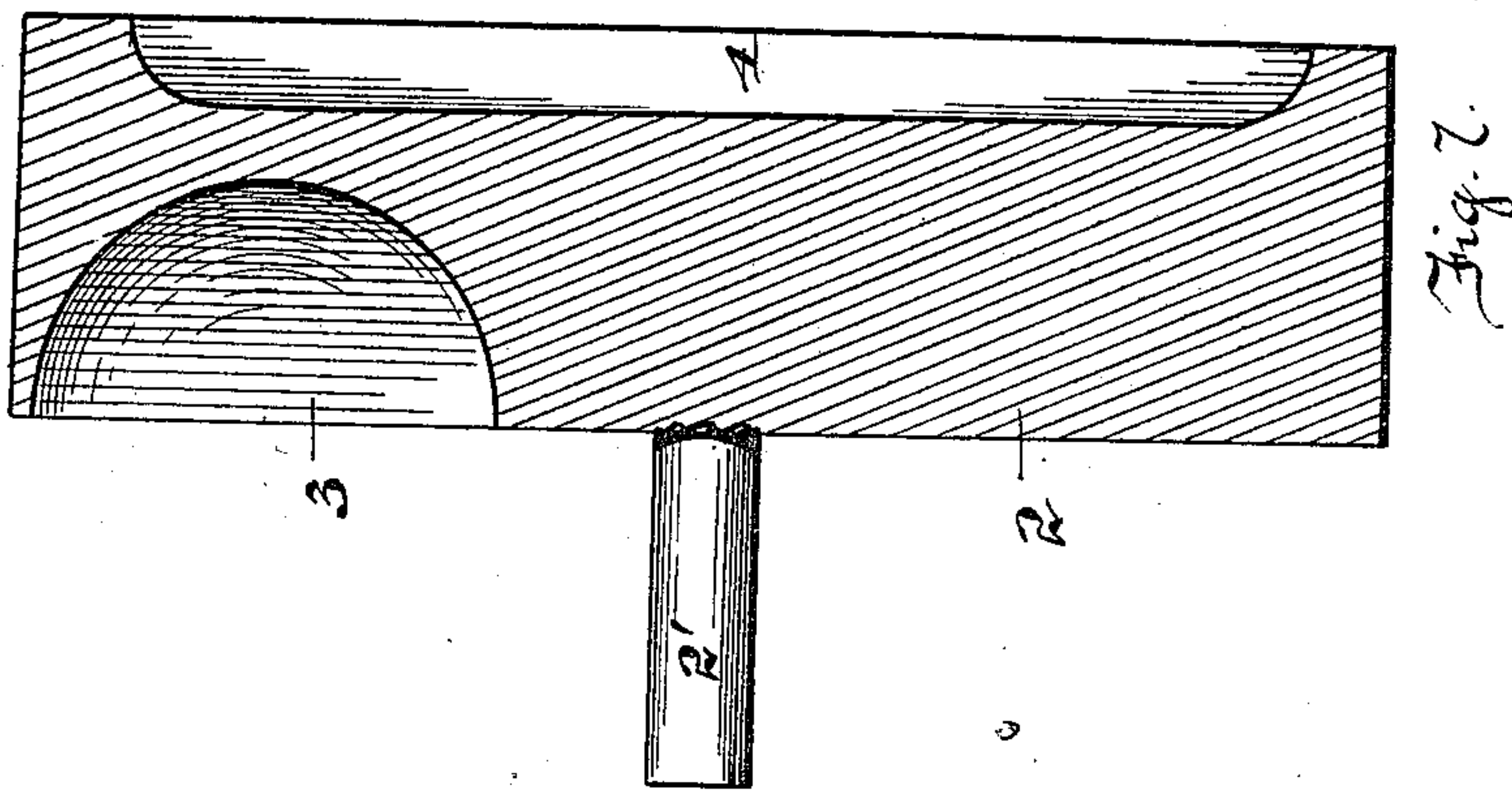
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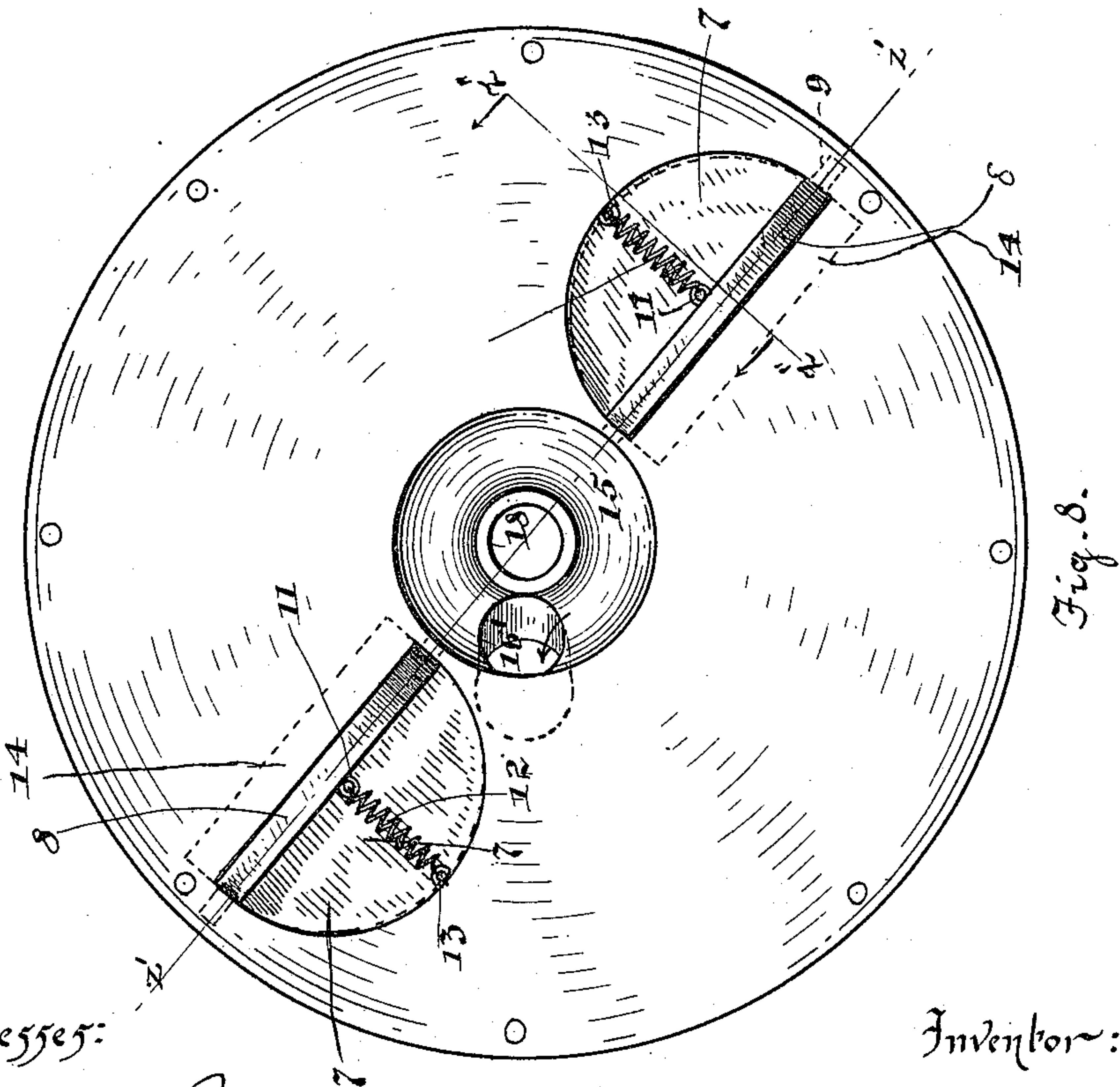
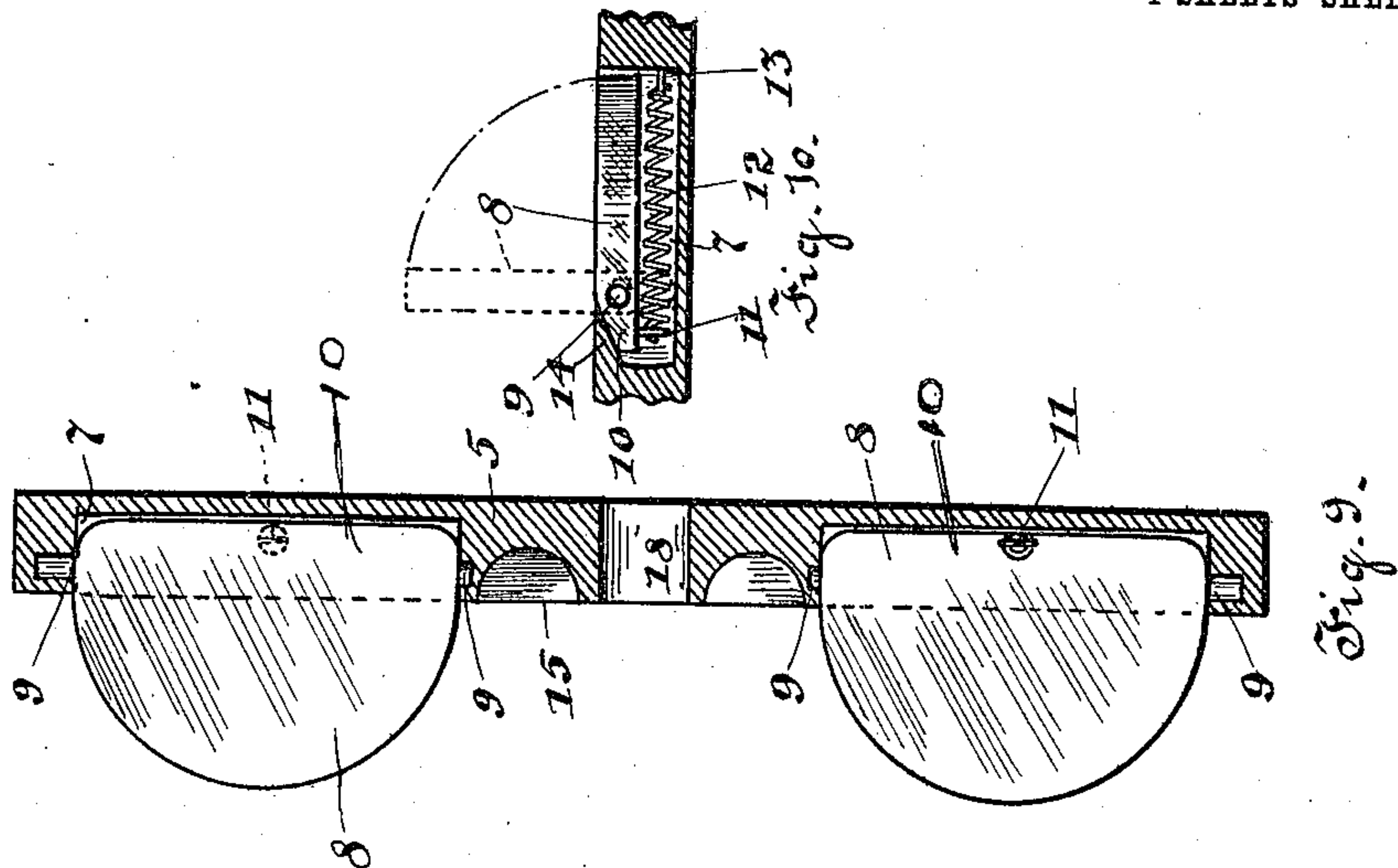
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UNITED STATES PATENT OFFICE.

GEORGE B. SEITZ, OF HAMMOND, INDIANA.

ROTARY ENGINE.

975,643.

Specification of Letters Patent. Patented Nov. 15, 1910.

Application filed January 15, 1910. Serial No. 538,274.

To all whom it may concern:

Be it known that I, GEORGE B. SEITZ, a citizen of the United States, residing at Hammond, county of Lake, and State of Indiana, have invented certain new and useful Improvements in Rotary Engines, of which the following is a specification.

My invention relates to improvements in rotary engines and has for its object the production of a rotary engine of simple construction and efficient in operation.

The invention consists in the combination and arrangement of parts hereinafter described and claimed.

The invention will be best understood by reference to the accompanying drawings forming a part of this specification, and in which,

Figure 1 is a side elevation of an engine embodying my invention, Fig. 2, an elevation at right angles to Fig. 1, Fig. 3, a section on line $x-x$ of Fig. 2, Fig. 4, a section on line $y-y$ of Fig. 3, Fig. 5, a partial section on line $z-z$ of Fig. 3, Fig. 6, a side elevation of the rotary member employed in the engine, Fig. 7, a vertical section of said rotary member, Fig. 8, an interior elevation of the exhaust plate employed in the engine, Fig. 9, a section on line $z'-z'$ of Fig. 8, and Fig. 10, a section on line $z''-z''$ of Fig. 8.

The preferred form of construction as illustrated in the drawings comprises a casing 1 in which is rotatably mounted a rotary member 2 having an annular chamber 3 in one side and a circular recess 4 in the other side. The ends of chamber 3 are separated by a partition 3' having a beveled side 3'' leading from the bottom of said chamber to the top of said partition and said rotary member carries an integral power shaft 2' for the transmission of power. Chamber 3 is closed by an exhaust plate 5 secured to standard 1 and recess 4 is closed by an intake plate 6 also secured to standard 1. Exhaust plate 5 is provided with oppositely disposed recesses 7 in which swinging gates 8 are pivoted upon trunnions 9. Each of said gates is provided with an end 10 projecting beyond said pivot and to which pins 11 are secured. Springs 12 are secured to pins 11 and anchored to pins 13 secured in the wall of said recess, said springs serving to normally hold gates 8 in a position to project outwardly from said recess. The gates 8 are substantially semi-cylindrical in form and so positioned

as to tightly fit the annular chamber 3 when in extended position, and each of said recesses is provided with an inwardly extending flange or shoulder 14 adapted to contact with the side of the corresponding gate and hold it in correct position for tight fitting in chamber 3.

Plate 5 is provided with a small annular exhaust recess 15 and an exhaust port 16 is provided in rotary member 2, located adjacent the beveled side 3'' of the partition 3 and in constant communication with recess 15. Plate 5 is also provided with a tapering exhaust opening 16' adapted to receive the end of exhaust pipe 17. A central opening 18 is provided in plate 5 for the passage of power shaft 2'. An intake pipe 19 is secured to plate 6 and serves to supply steam or other fluid under pressure to circular intake recess 4. An intake port 20 is provided in rotary member 2 adjacent the side of partition 3 opposite to exhaust port 16, and serves to place chamber 3 in constant communication with intake recess 4.

In operation steam is supplied to recess 4 and passes thence to chamber 3 through the port 20 where its pressure is exerted upon one of the gates 8 and one side of partition 3'. This causes rotation of member 2 and consequently of power shaft 2' in the direction indicated by the arrows on Figs. 3 and 6. As partition 3' contacts with each of said gates in its revolutions beveled edge 3'' serves to force gates 8 into recess 7 to permit the passage of said partition. The exhaust takes place through port 16 as the spaces between gates 8 pass port 16, the arrangement being such that there is always a gate 8 between intake port 20 and exhaust port 16. It will be observed that this construction furnishes a simple and efficient means for utilizing the pressure of steam to produce rotary motion, and that power may be obtained from shaft 2' through a pulley or other suitable means.

While I have illustrated and described the preferred construction for carrying my invention into effect this is capable of variation or modification without departing from the spirit of my invention. I therefore do not wish to be limited to the exact details of construction set forth, but desire to avail myself of such variations and modifications as fairly fall within the scope of the appended claims.

Having described my invention what I

claim as new and desire to secure by Letters Patent is:

1. A rotary engine comprising a casing; a member rotatably mounted in said casing and provided in one face with an intake recess and in its other face with an annular chamber the ends of which are supported by a partition, there being an intake port leading from said recess to said annular chamber adjacent one side of said partition; an intake plate secured to said casing to close said intake recess; an intake pipe secured to said intake plate and leading to said recess; an exhaust plate secured to said casing and adapted to close said annular chamber, said exhaust plate being provided with an exhaust recess and a gate recess, there being a continuous port leading from said annular chamber adjacent the side of said partition opposite to said intake port to said exhaust recess; a swinging gate pivoted in said gate recess and of a contour to nicely fit said annular chamber; spring means for normally holding said gate in operative position in said annular chamber; and a power shaft secured to said rotatable member.

2. A rotary engine comprising a casing; a member rotatably mounted in said casing and provided in one face with a circular intake recess and in the other face with an

annular chamber the ends of which are separated by a partition beveled on one side, there being an intake port leading from said circular recess to said annular chamber adjacent the other side of said partition; an intake plate secured to said casing to close said intake recess; an intake pipe secured to said intake plate and leading to said recess; an exhaust plate secured to said casing and adapted to close said annular chamber, said exhaust plate being provided with a small annular exhaust recess and oppositely disposed gate recesses, there being a continuous port leading from said annular chamber adjacent the beveled side of said partition to said exhaust recess; oppositely disposed swinging gates pivoted in said gate recess and of a contour to nicely fit said annular chamber; spring means for normally holding said gates in operative position in said annular chamber; and a power shaft secured to said rotatable member, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE B. SEITZ.

Witnesses:

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JOSHUA R. H. POTTS.