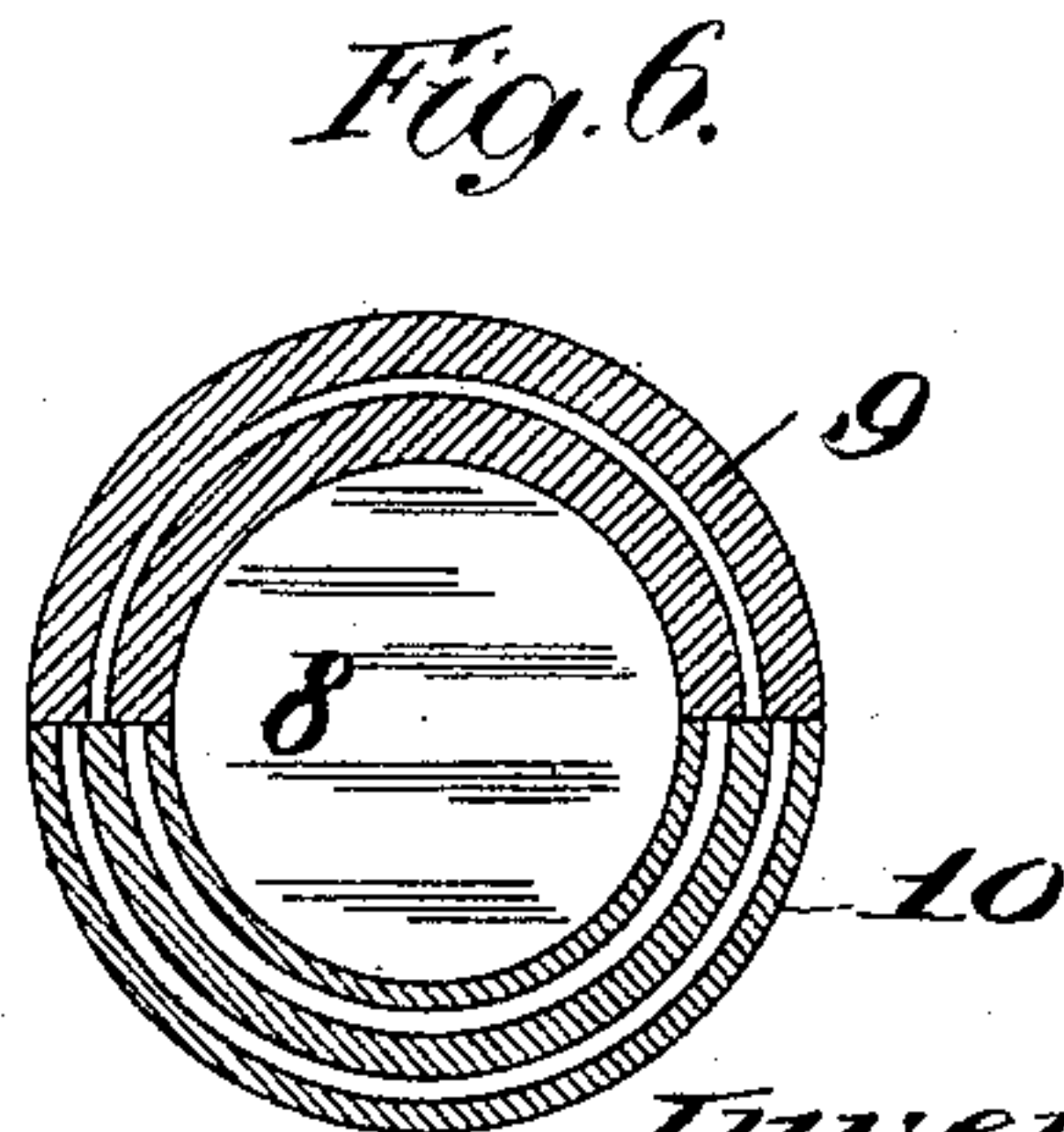
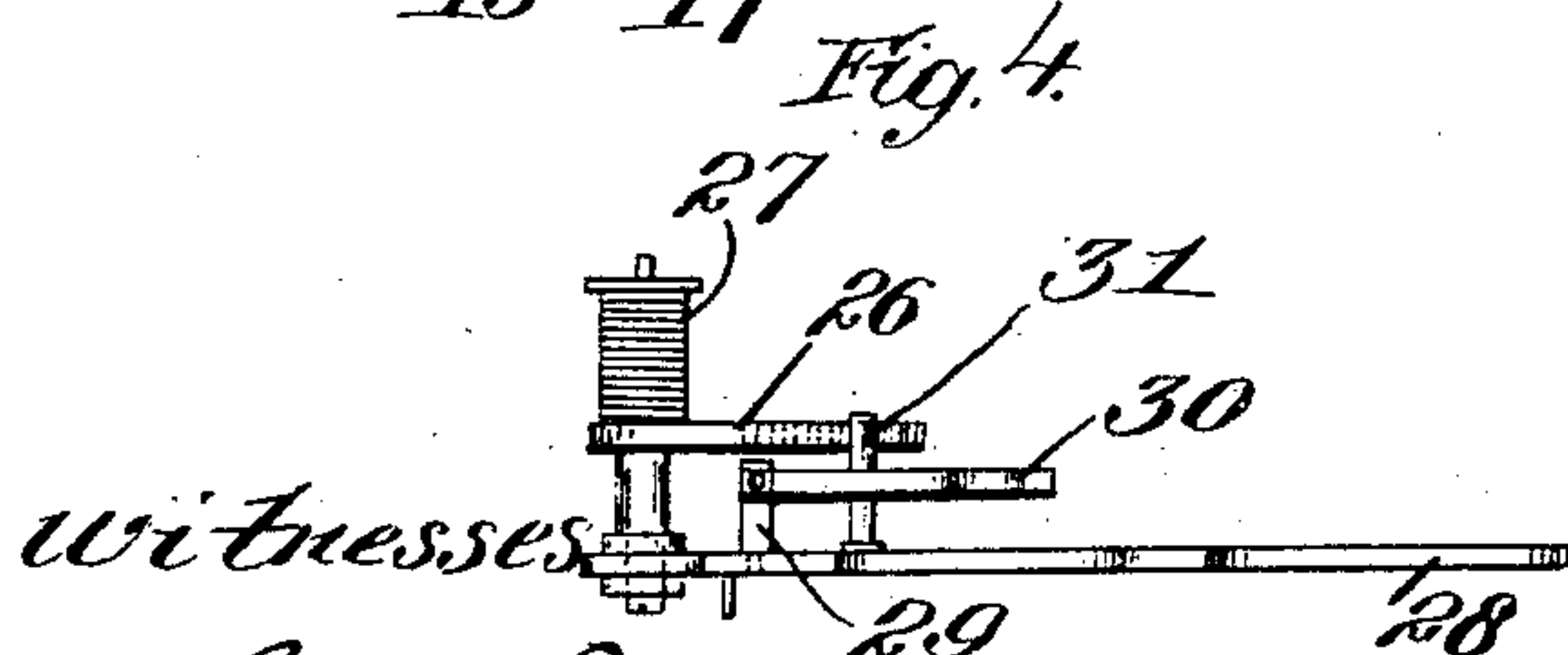
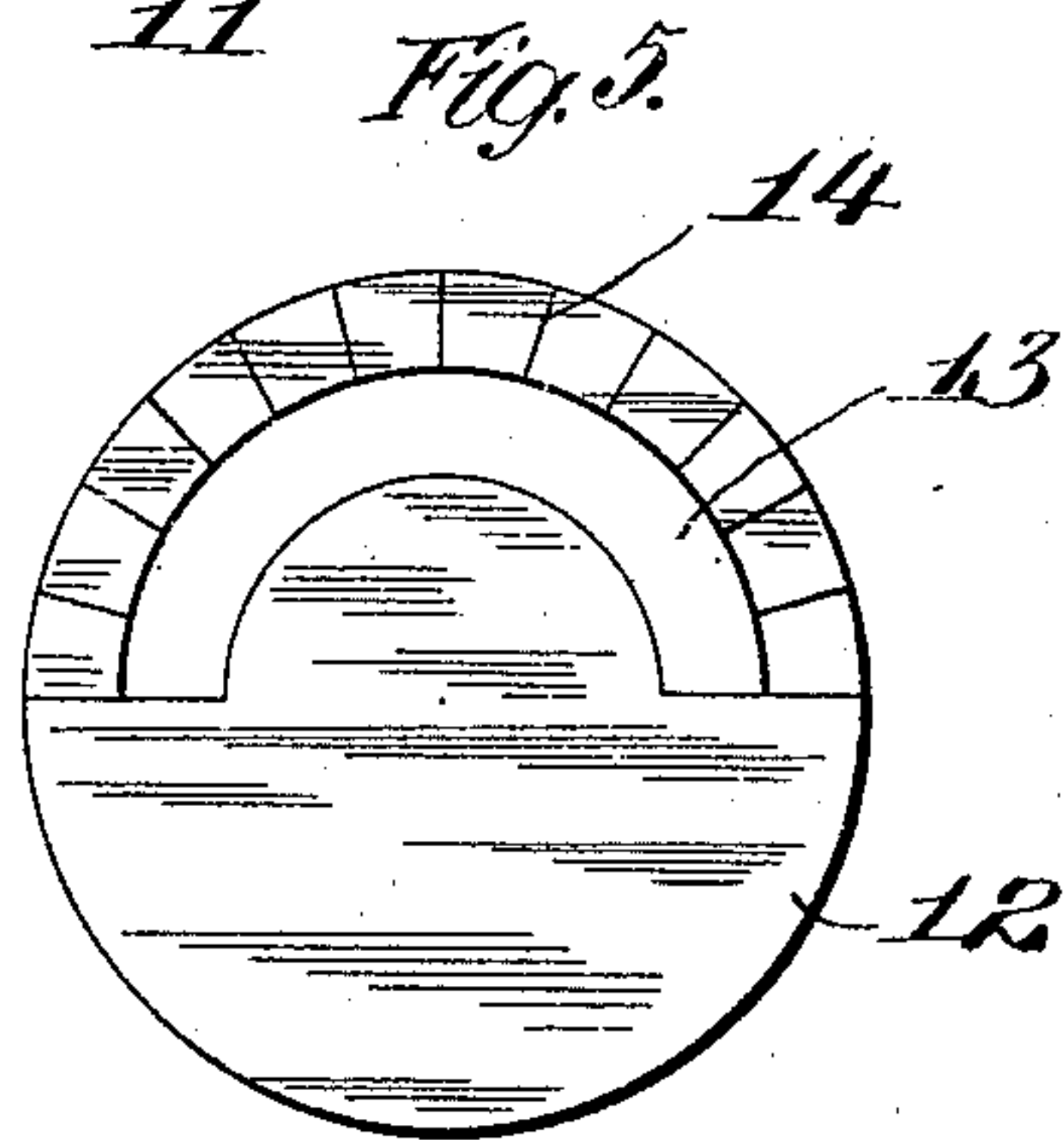
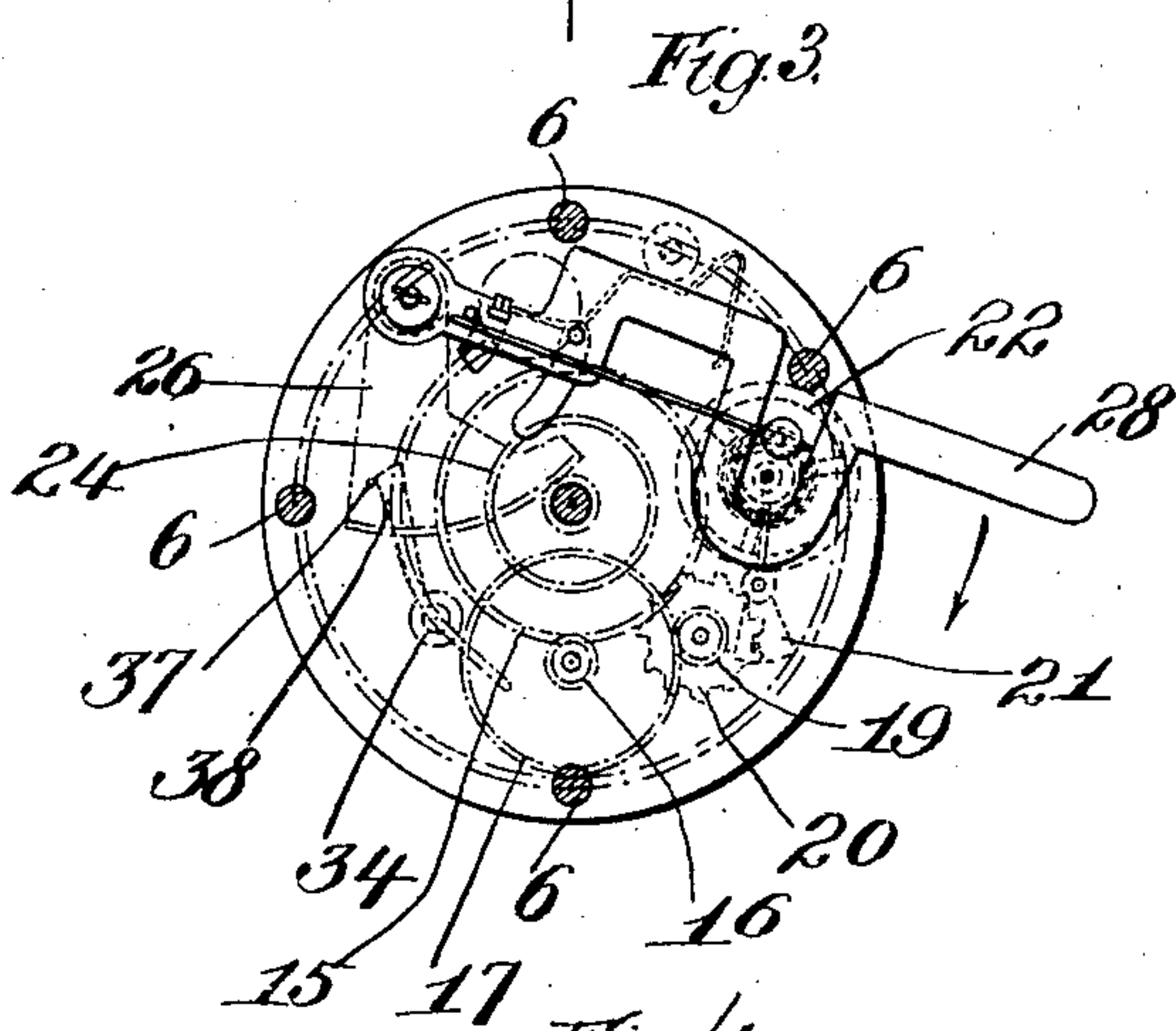
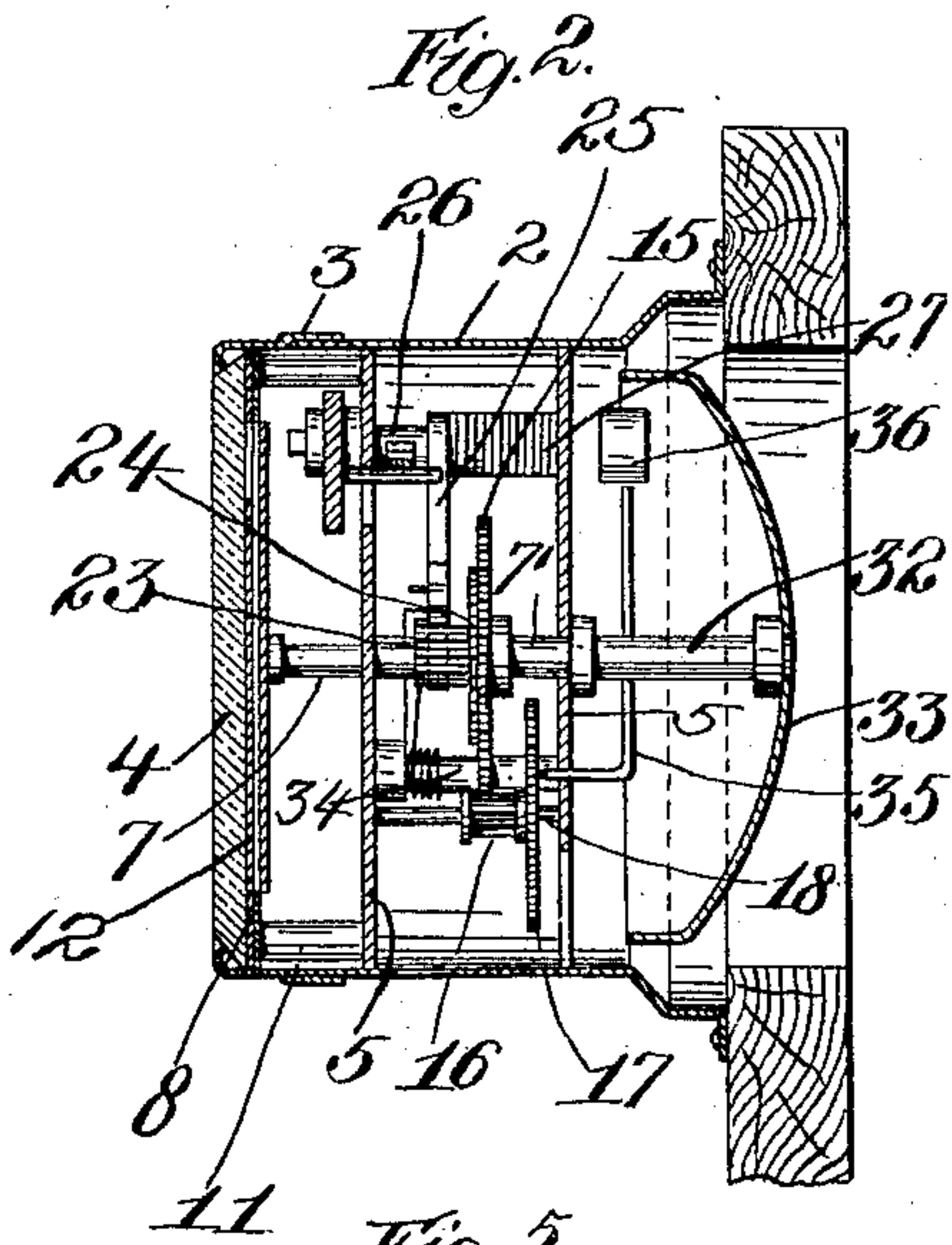
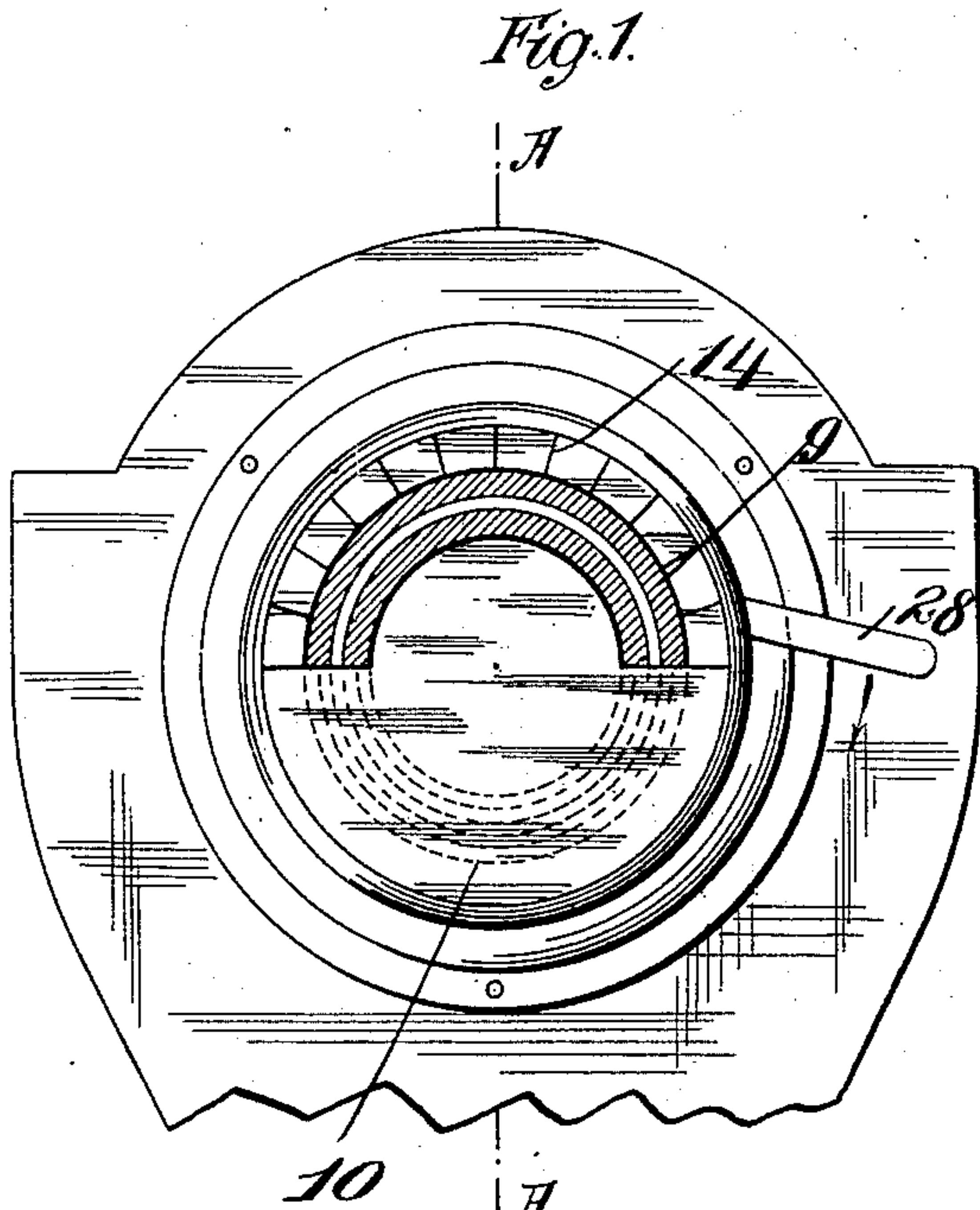


A. VONHAUSEN.
TELEPHONE CLOCK.
APPLICATION FILED NOV. 13, 1905.

917,202.

Patented Apr. 6, 1909.
2 SHEETS—SHEET 1.



Witnesses

Robert G. Smith

Chas. H. Kessler

By

August Vonhausen

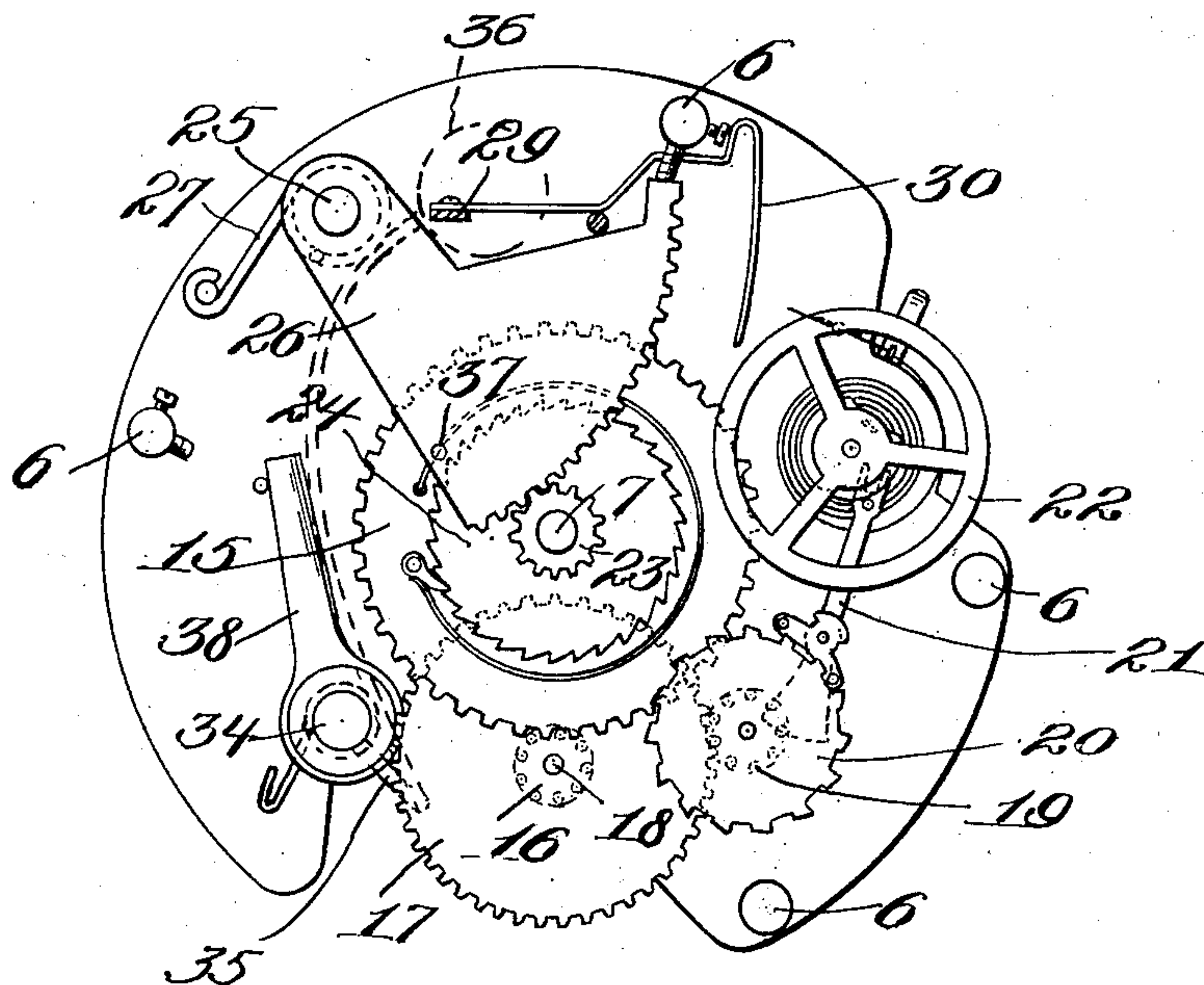
James L. Norris

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2 SHEETS—SHEET 2.

Fig. 7.



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C. D. Kessler
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UNITED STATES PATENT OFFICE.

AUGUST VONHAUSEN, OF WIESBADEN, GERMANY, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
HAMBURG-AMERIKANISCHE UHRENFABRIK, OF SCHRAMBERG, GERMANY.

TELEPHONE-CLOCK.

No. 917,202.

Specification of Letters Patent.

Patented April 6, 1909.

Application filed November 13, 1905. Serial No. 287,209.

To all whom it may concern:

Be it known that I, AUGUST VONHAUSEN, a citizen of the Empire of Germany, residing at Wiesbaden, in the Empire of Germany, have invented certain new and useful improvements in Telephone-Clocks, of which the following is a specification.

The invention relates to a clock, and more particularly to the class of telephone clocks which show in an observable manner the time utilized during the course of a conversation from the beginning thereof and until the discontinuance.

The primary object of the invention is the provision of clock mechanism to audibly signal the timekeeper the amount of time involved in a conversation between predetermined periods.

A further object of the invention is the provision of a clock mechanism having a setting element for starting the clock in operation at the exact moment of the starting of the conversation and at a fixed period to audibly signify a predetermined period of time the course of conversation has reached.

A further object of the invention is a provision of a telephonic clock, having a rotatable member, such as a dial, the same being divided into sections distinguished from each other by variable colorings thereon, and a fixed front plate as a disk having a segment shaped excision therein through which the various colored sections can be observed during the rotation of the dial.

A still further object of the invention is the provision of clock mechanism for actuating a colored sectional member, such as the dial to cause the rotation thereof and a coöperative audible signal, such as a bell for indicating the lapse of time during the duration of the conversation to the person keeping tab thereon.

With these and other objects in view, the invention, for example, consists in the construction, combination and arrangement of parts as hereinafter described and as illustrated in the accompanying drawings which disclose the preferred embodiment of the invention, however, it is to be understood that changes, variations and modifications may be made as come properly within the scope of the claims hereunto appended.

In the drawings—Figure 1 is a front

view of the invention; Fig. 2 is a longitudinal section on the line A—A, Fig. 1; Fig. 3 is a front view with the dial and casing removed from the clock; Fig. 4 is a top view of the lever and its coöperative parts for setting the clock; Fig. 5 is a front view of the face of the disk with the segmental excision therein; Fig. 6 is a face view of the dial. Fig. 7 is a plan view of the invention with the dial, front plate of the frame and the casing removed.

Similar reference characters indicate corresponding parts throughout the several views in the drawings.

In the drawings the numeral 2 designates a cylindrical casing which may be of any other desirable shape, and has a removable collar 3 at the front thereof for supporting a transparent plate 4 forming the face of the casing. Within the casing is mounted a frame including spaced plates 5 having spacer rods 6 for holding the said plates 5 spaced from each other, and which forms the clock frame. Journaled centrally in the plates 5 is a rotatable shaft 7 projecting outwardly at the front of the frame and having at the free end thereof a rotary dial 8 having its face divided into two sections 9 and 10, each of the latter being of distinctive colors of any desirable hue so forming sectors. Between the point of juncture of the two sectors at one side and the point of juncture at the outer side, there is during the movement of the dial, a lapse of time, say for instance, three minutes, that is, when the dial travels in its rotary movement from a fixed point to a given point directly opposite the fixed point, which constitutes a one-half revolution of said dial, and which it will have traveled during a period of three minutes, and when the said dial has traveled from one fixed point a whole revolution, the same being traveled in a period of six minutes duration.

Projecting from the front face plate 5 of the frame are studs 11 upon which is fixedly mounted a disk 12, the latter having a segment excision 13 therein of any desirable width through which can be observed the rotation of the dial 8, and in this manner a person can detect the extent of travel of the colored sections. On the face of the disk 12 above the segmental excision 13 are a plurality of radial lines 14 which form a scale

or markings to judge the extent of rotation of the dial 8.

Between the plates 5 of the frame and on the fixed shaft 7' is loosely mounted a gear wheel 15, the same being in mesh with a cog gear 16 having a gear wheel 17 supported by a spindle 18 pinioned in the clock frame. Said gear wheel 17 meshes with a cog gear 19 carried on a pinion having an escapement wheel 20 controlled by an escapement lever 21, the latter actuated by a hair spring controlled balance wheel 22, geared in the clock frame. Also fixedly mounted on the shaft 7 is a cog gear 23 having a ratchet wheel 24 contiguous with the gear wheel 15. Said gear wheel 15 carries a spring controlled pawl, for engagement with the ratchet wheel 24 to lock the same against independent movement in one direction and to free the same for movement in an opposite direction.

Near the periphery of the plates 5 is rotatably mounted a spindle 25 having fixed thereto a toothed segment 26 which is in mesh with the gear 23 fixedly mounted on the shaft 7, and which is controlled by a spring 27 for raising the toothed segment to an elevated position after having been depressed.

Beyond the front plate 5 of the clock frame and secured to the free end of the spindle 25 is a hand lever 28 for the purpose of actuating the spring controlled toothed segment 26, to bring the same in a position for causing movement of the train of gears and also during the said movement of the segment the dial is brought to reset position. Projecting inwardly from the lever 28 is a stud 29 carrying a flexible brake shoe 30 for contact with the periphery of the balance wheel 22 during the downward movement of the said lever 28 for holding the same against movement when the lever is depressed and on the return thereof to the normal position initially starts the movement of said balance wheel. For assuring a more positive movement to the toothed segment 26 the said lever 28 is provided with a further projection 31 which is in contact with said segment 26, and directly acts on the same when the lever 28 is forced downwardly.

Projecting in the rear of the back plate 5 of the clock frame is a stem 32 for supporting a bell 33. In the clock frame between the plates 5 is pinioned an oscillatory spring controlled spindle 34 having an arm 35 carrying at the free end a bell clapper 36, which causes the ringing of the bell 33 when the dial 8 has made one revolution. To actuate the bell clapper 36 there is provided on the toothed segment 26 a projecting pin 37 which is adapted to trip an arm 38 carried on the spindle 34 and upon the downward movement of the segment 26

trips said arm 38, thus causing an oscillation of the arm 35 bringing the bell clapper 36 in contact with the bell 33 and upon upward movement of said segment 26, after the same has almost reached its highest elevation, the pin 37 again trips the arm 38 which will again cause the clapper to contact and ring the bell 33 to give an audible signal.

In operation, the operator presses downwardly the lever 28 thereby causing the rotation of the shaft 7 to set the dial 8 by having one of the colored sections brought into view through the segmental excision 13, and at the same time setting the train of gears into motion for rotating the dial 8, then after the operator releases the lever 28 the same will be returned to normal position. The dial now having been set in rotation will move causing the one colored section to rotate and disappear from sight by virtue of the excision 13, which will indicate to the operator that a time of three minutes has elapsed and if it is desired to reset the same by said operator again pressing on the lever 28, shifts the dial to reset position and at the same time causing the ringing of the bell 33. However, if the operator does not desire to reset the dial the latter will continue in its rotation and when the said colored section has again been brought to full view through the excision 13, the toothed segment has automatically actuated the bell clapper 36 causing the bell to ring, signaling the operator that a period of six minutes of time has been reached, and necessitating the resetting of the dial.

Having described the invention what is claimed, is:—

1. In a clock of the class described, a revoluble dial having a face of different colors, a train of gears coöperative with the dial, a spring controlled segment operative upon the gears to actuate the same, a spring-controlled lever for actuating the segment to move the same in position for resetting the dial and also to act upon the gears to impart movement thereto, a spring-actuated escapement mechanism coöperative with the gears, and a yieldable shoe carried by the lever to control the escapement mechanism.

2. In a telephonic clock, a casing having a transparent plate, a fixed disk having an arch-shaped slot in the face thereof and in rear of the transparent plate, a rotatable dial having a plurality of colored sections, gear mechanism for rotating said dial, a spring-controlled escapement device coöperative with the gear mechanism to regulate the movement thereof, a spring-controlled segment operative upon the gear mechanism to impart movement thereto when actuated in one direction and to reset the dial when moved in an opposite direction, and a spring-controlled lever operative upon the

segment to shift the same in position for resetting the dial and also for actuating the gear mechanism.

3. In a telephone time-indicator, in combination, an arbor, a spring actuated lever turning thereon, a main spring wound up by the lever; a toothed segment on the arbor and rotated by the lever and returned by the main spring; a balance; a train and escapement transmitting to the balance the motion from the segment when the latter is driven by the main-spring; and hammer mechanism actuated by said segment; substantially as described.

4. In a telephone time-indicator, in combination, an arbor, a spring actuated lever turning thereon; a main spring wound up by the lever, a toothed segment on the arbor and rotated by the lever and returned by the main spring; a balance; a train and escapement transmitting to the balance the motion from the segment when the latter is driven by the main spring; a balance starting device carried by said lever; and hammer mechanism actuated by said segment; substantially as described.

5. In a telephone time-indicator, in com-

bination, a main spring, a toothed segment, spring actuated means adapted to rotate said segment in one direction to wind the main spring for returning said segment, a balance, a train and escapement, transmitting to the balance the motion from the segment when the latter is returned by the main spring, and hammer mechanism actuated by said segment.

6. In a telephone time-indicator, in combination, a main spring, a toothed segment, spring actuated means adapted to rotate said segment in one direction to wind the main spring for returning said segment, a balance, a train and escapement transmitting to the balance the motion from the segment when the latter is returned by the main spring, a balance stopping and starting device carried by said spring actuated means, and hammer mechanism actuated by said segment.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

AUGUST VONHAUSEN.

Witnesses:

JEAN EFFELBERGER,
LOUIS KRUGER.