

No. 677,151.

Patented June 25, 1901.

A. ANZELEWITZ.
STEM WINDING WATCH.

(Application filed July 13, 1899.)

(No Model.)

3 Sheets—Sheet 1.

Fig. 1.

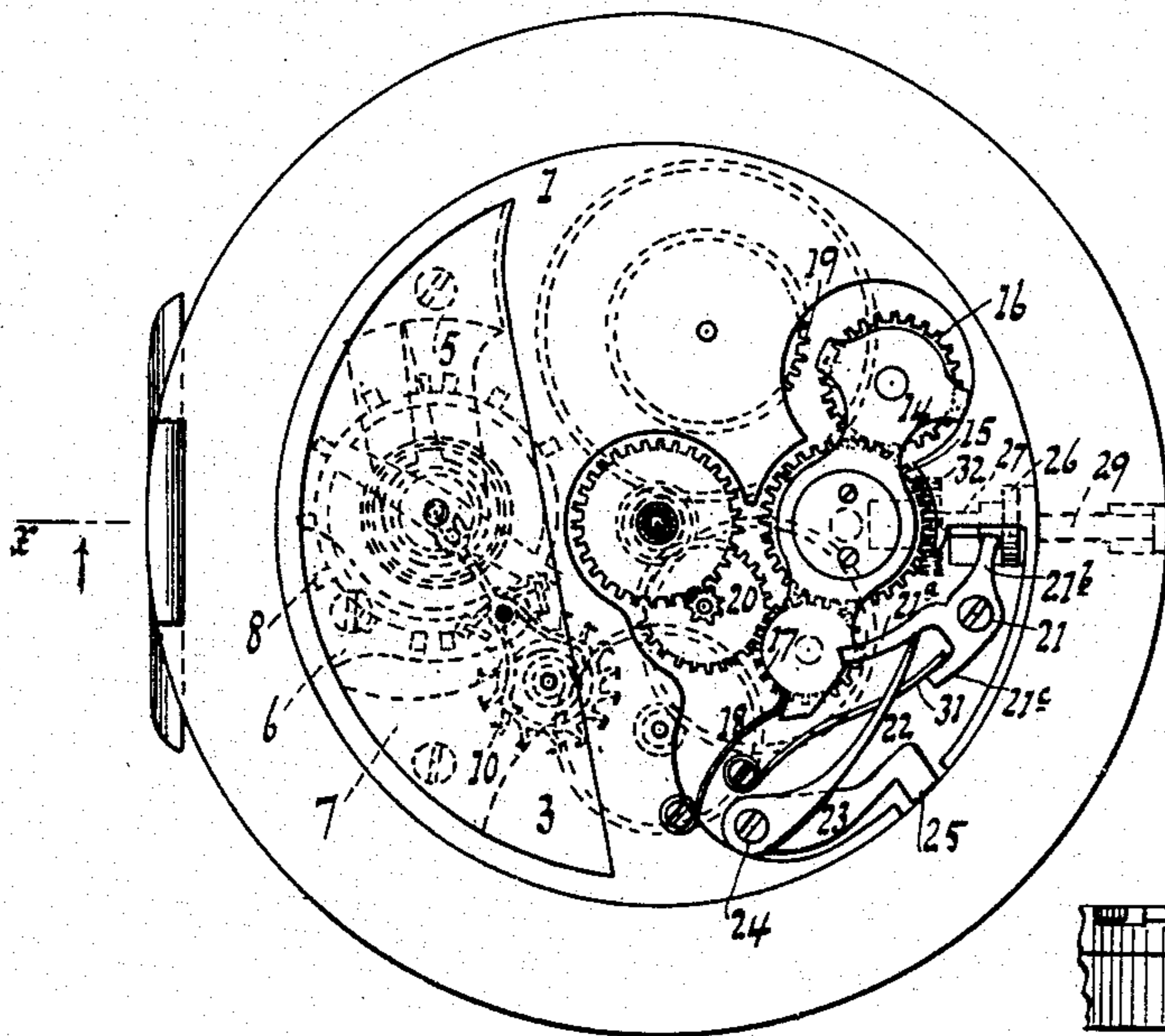


Fig. 5.

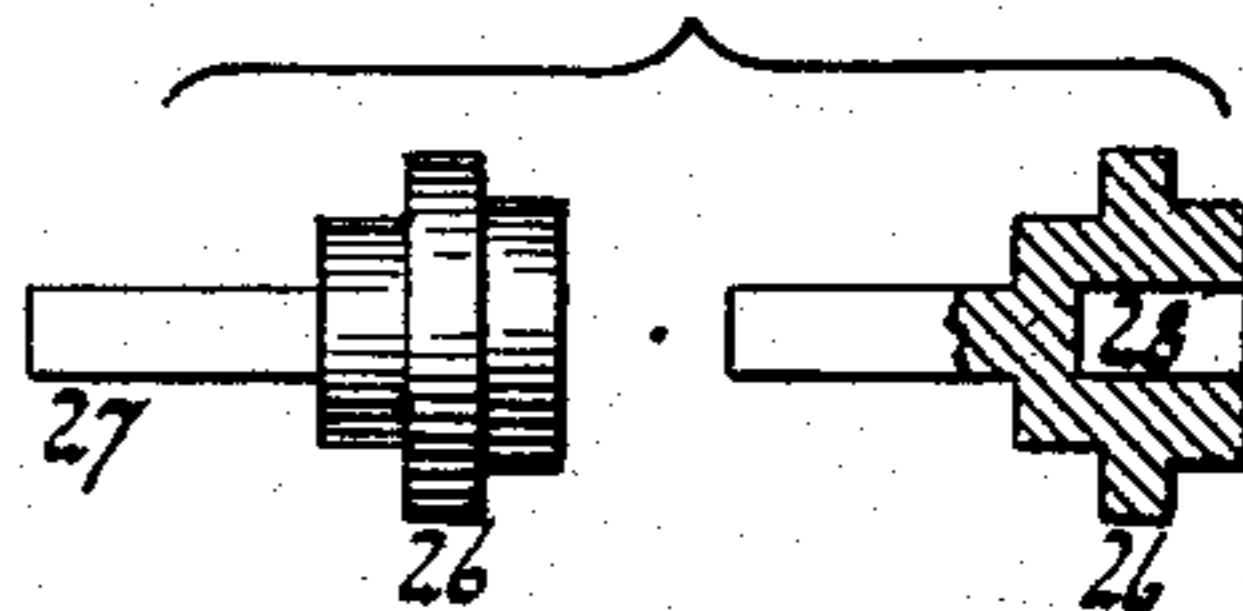


Fig. 6.

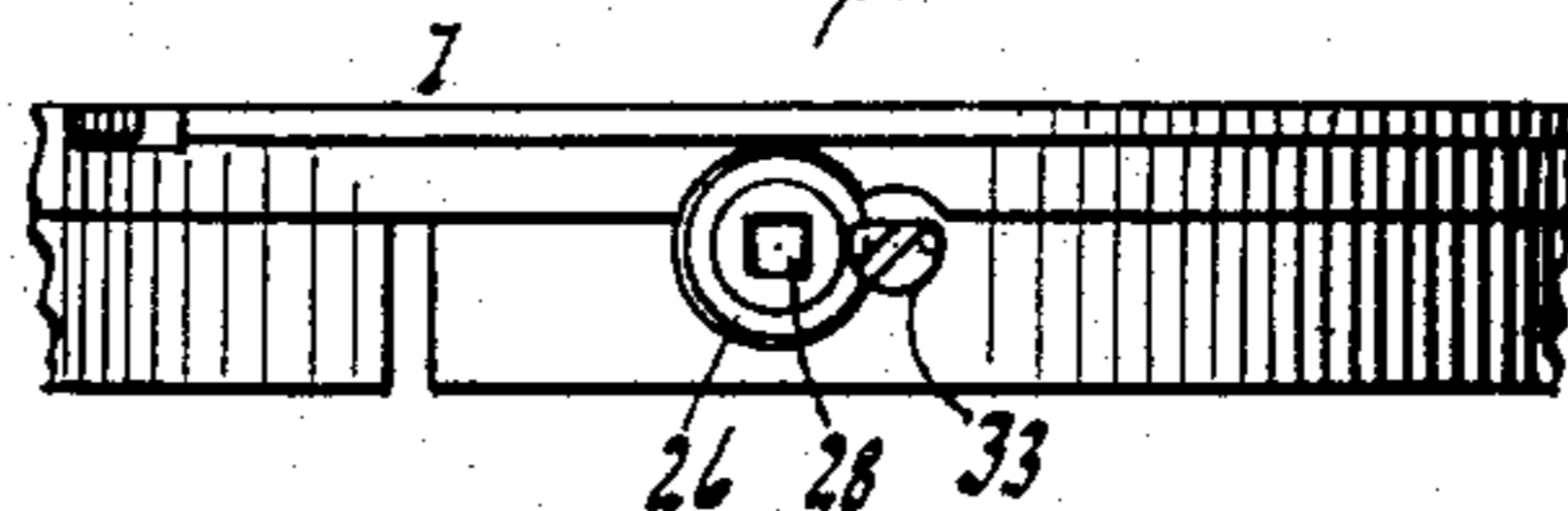


Fig. 2.

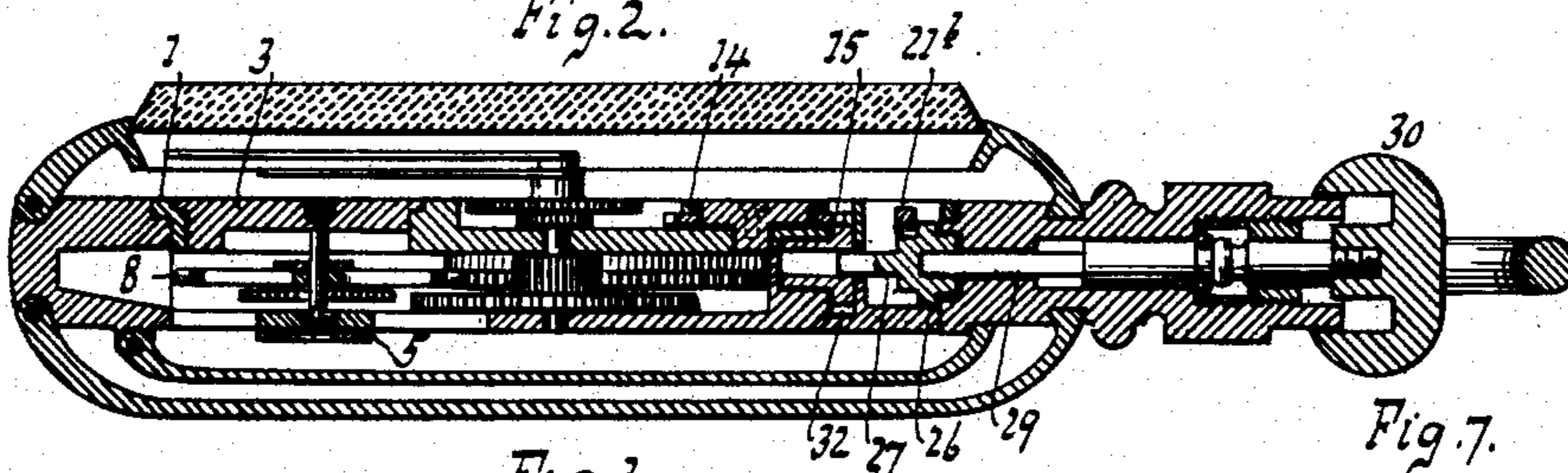


Fig. 3.

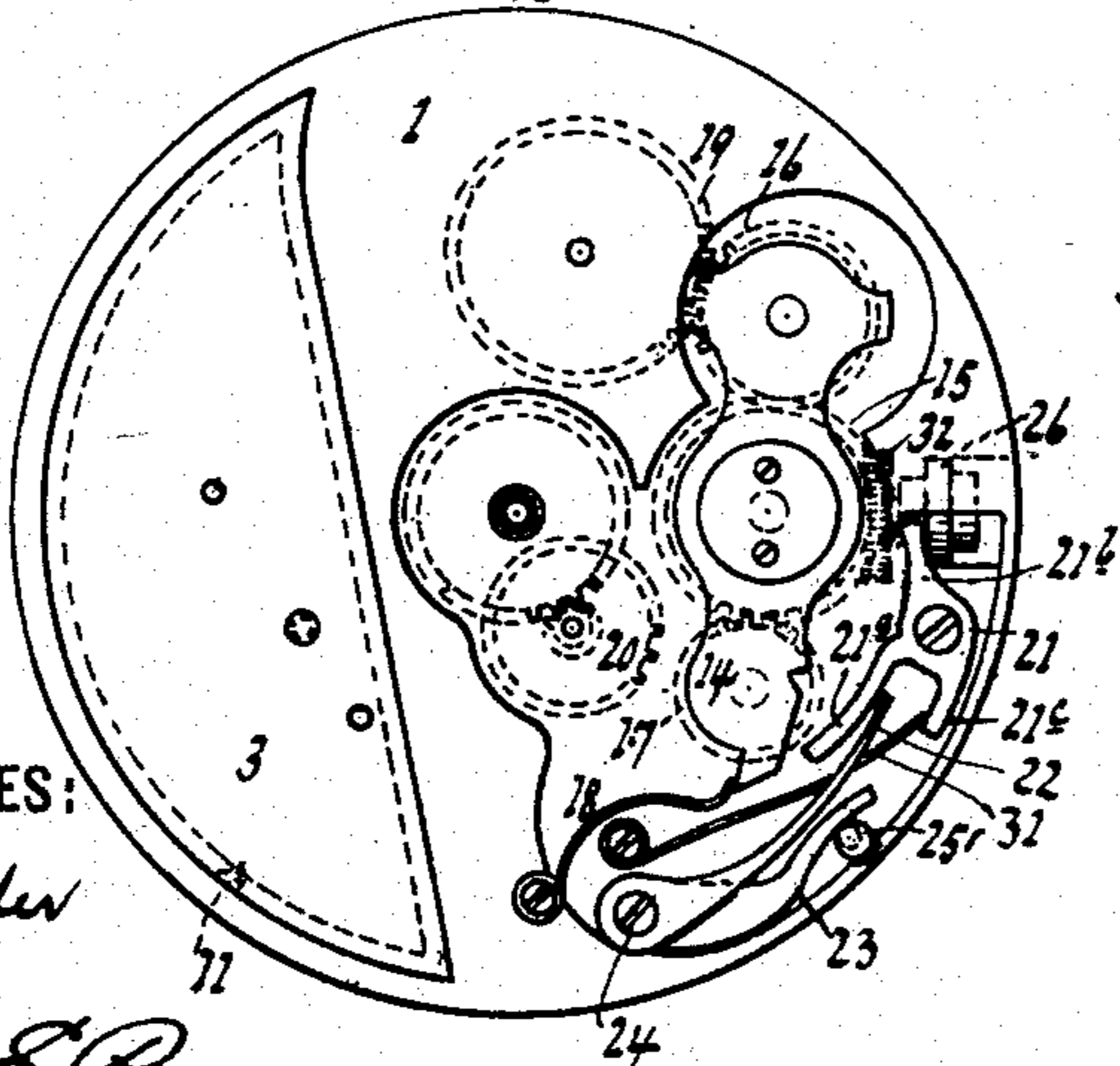


Fig. 4.

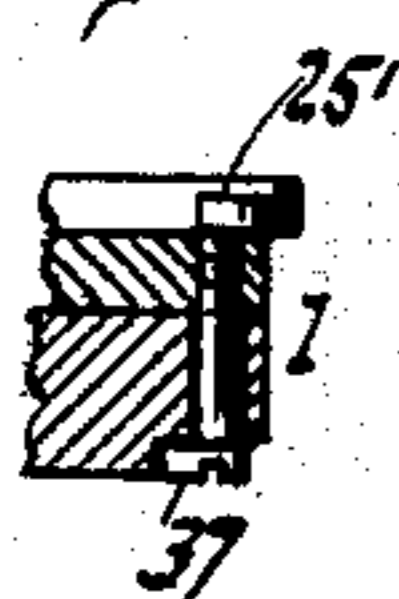
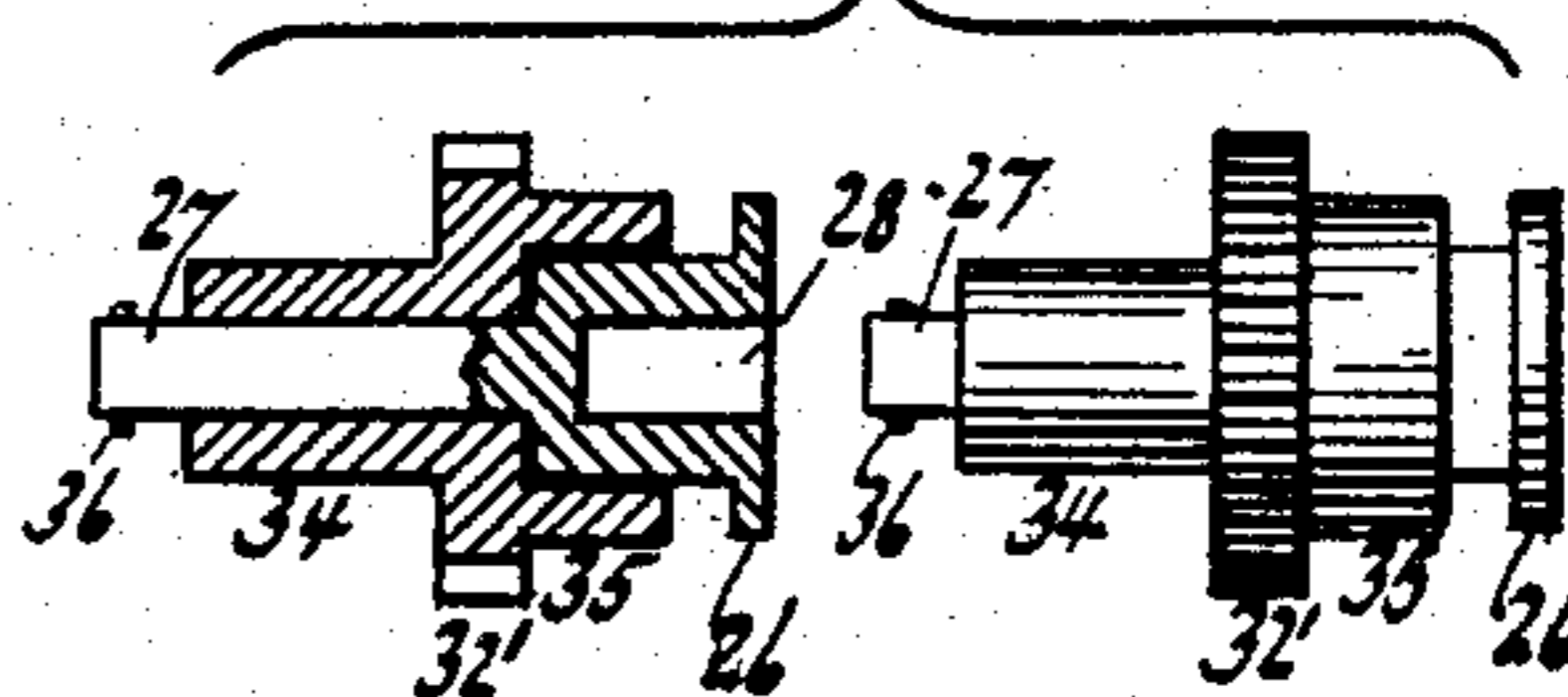


Fig. 7.



WITNESSES:
William Miller

Chas. E. Reagen

INVENTOR

Abraham Anzelewitz

BY

Hauff + Hauff
ATTORNEYS

No. 677,151.

Patented June 25, 1901.

A. ANZELEWITZ.
STEM WINDING WATCH.

(Application filed July 13, 1899.)

(No Model.)

3 Sheets—Sheet 2.

Fig. 8.

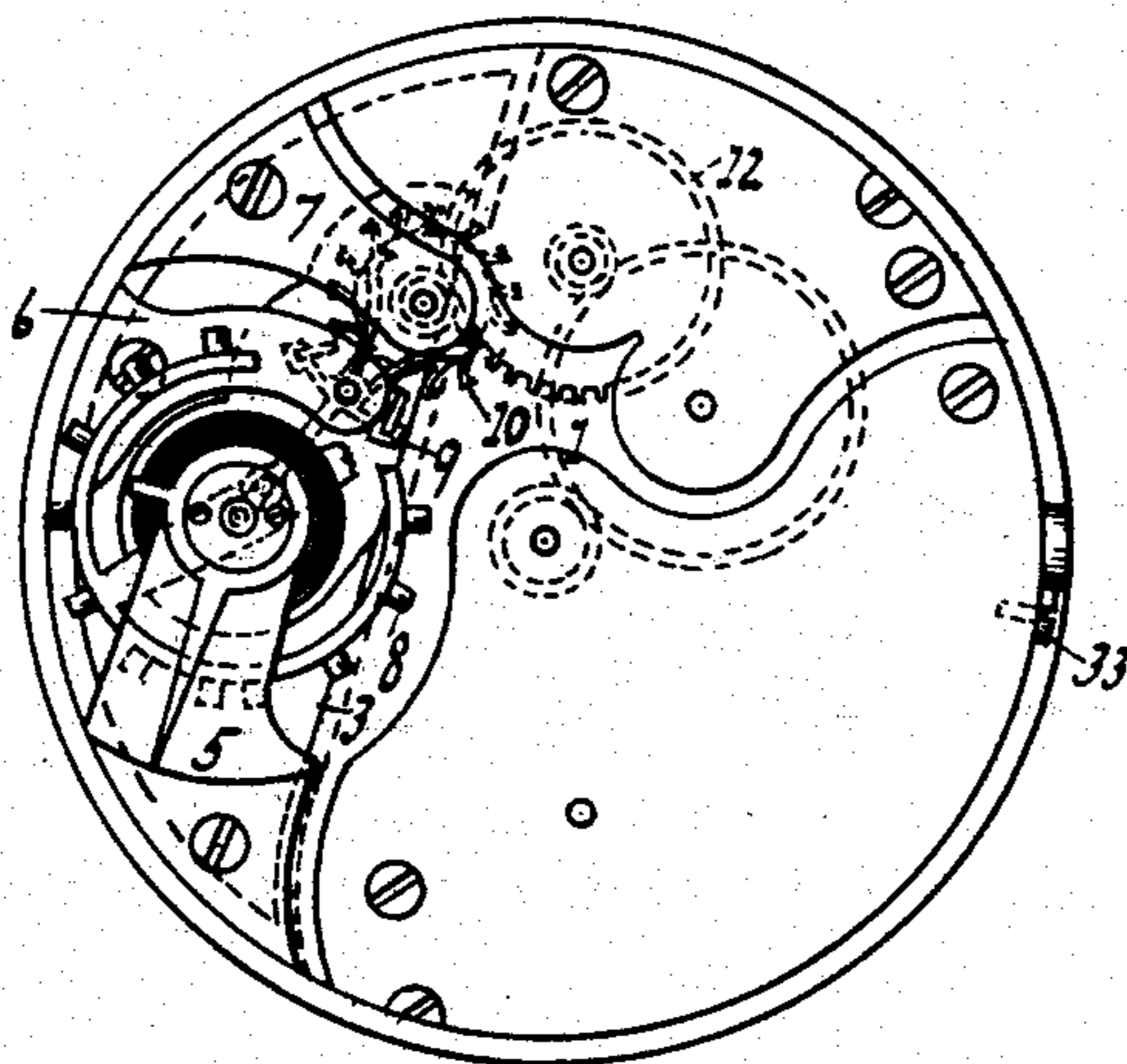


Fig. 9.

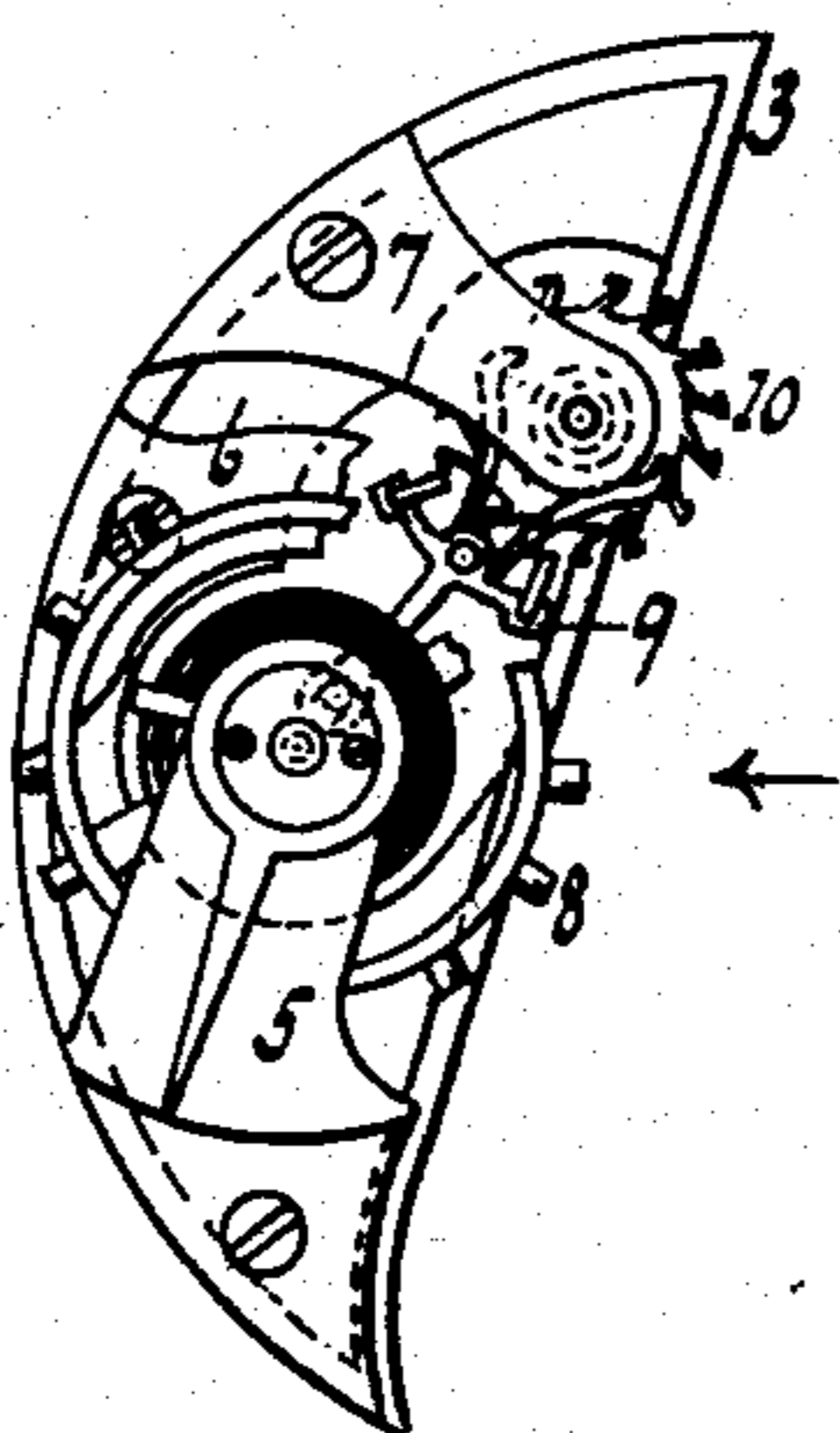
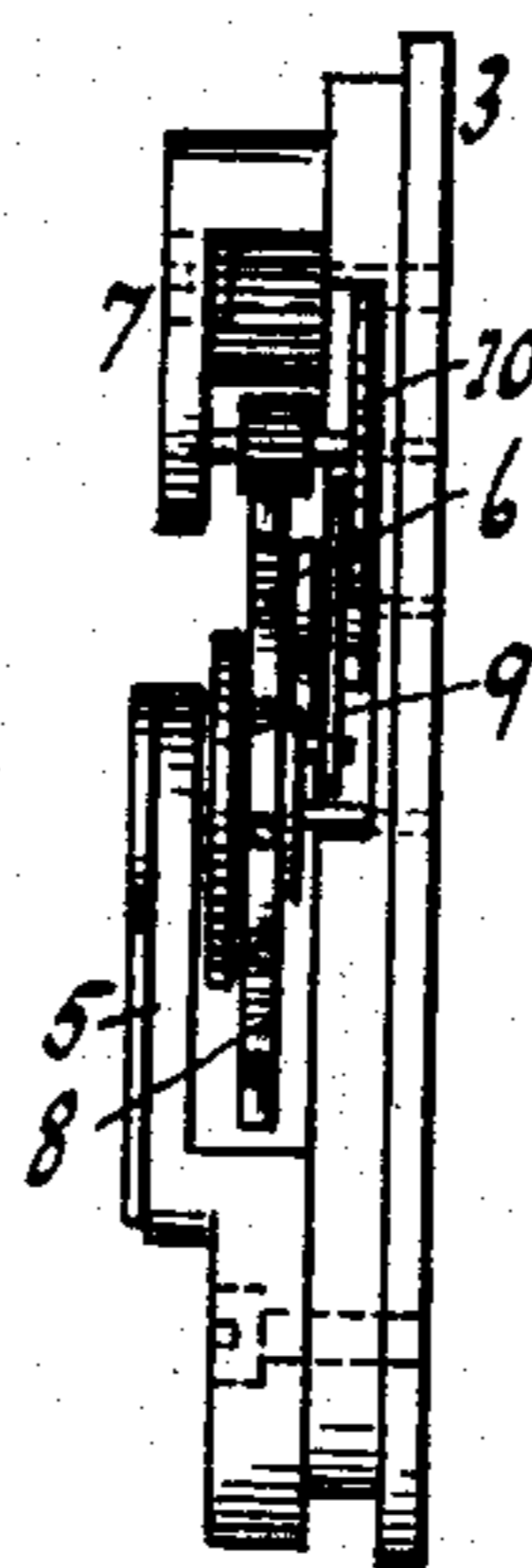


Fig. 10.



WITNESSES:

William Miller
Chas. E. Deussen

INVENTOR

Abraham Anzelewitz

BY

Hauff + Hauff

ATTORNEYS

No. 677,151.

Patented June 25, 1901.

A. ANZELEWITZ.
STEM WINDING WATCH.
(Application filed July 13, 1899.)

(No Model.)

3 Sheets—Sheet 3.

Fig. 11.

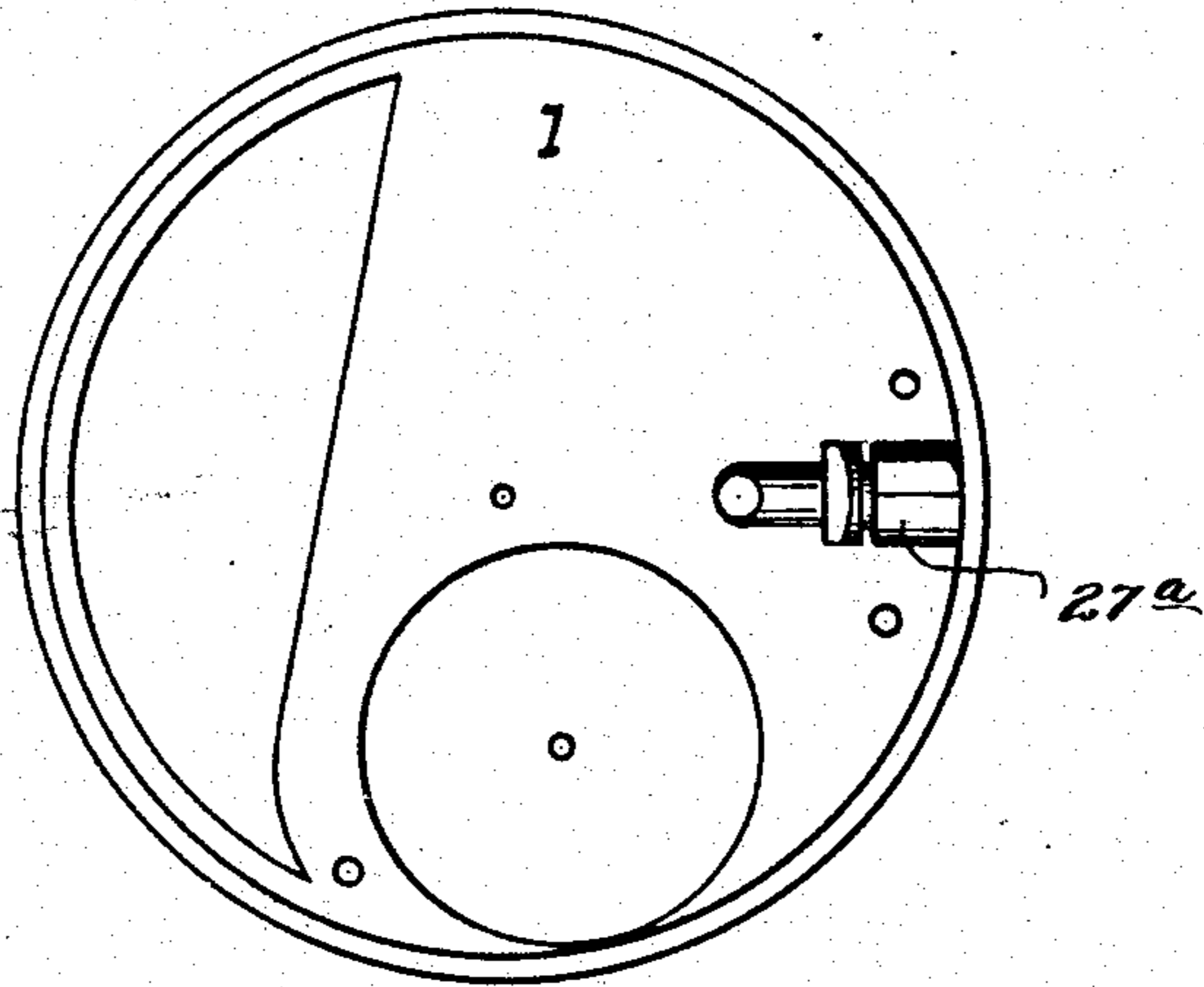
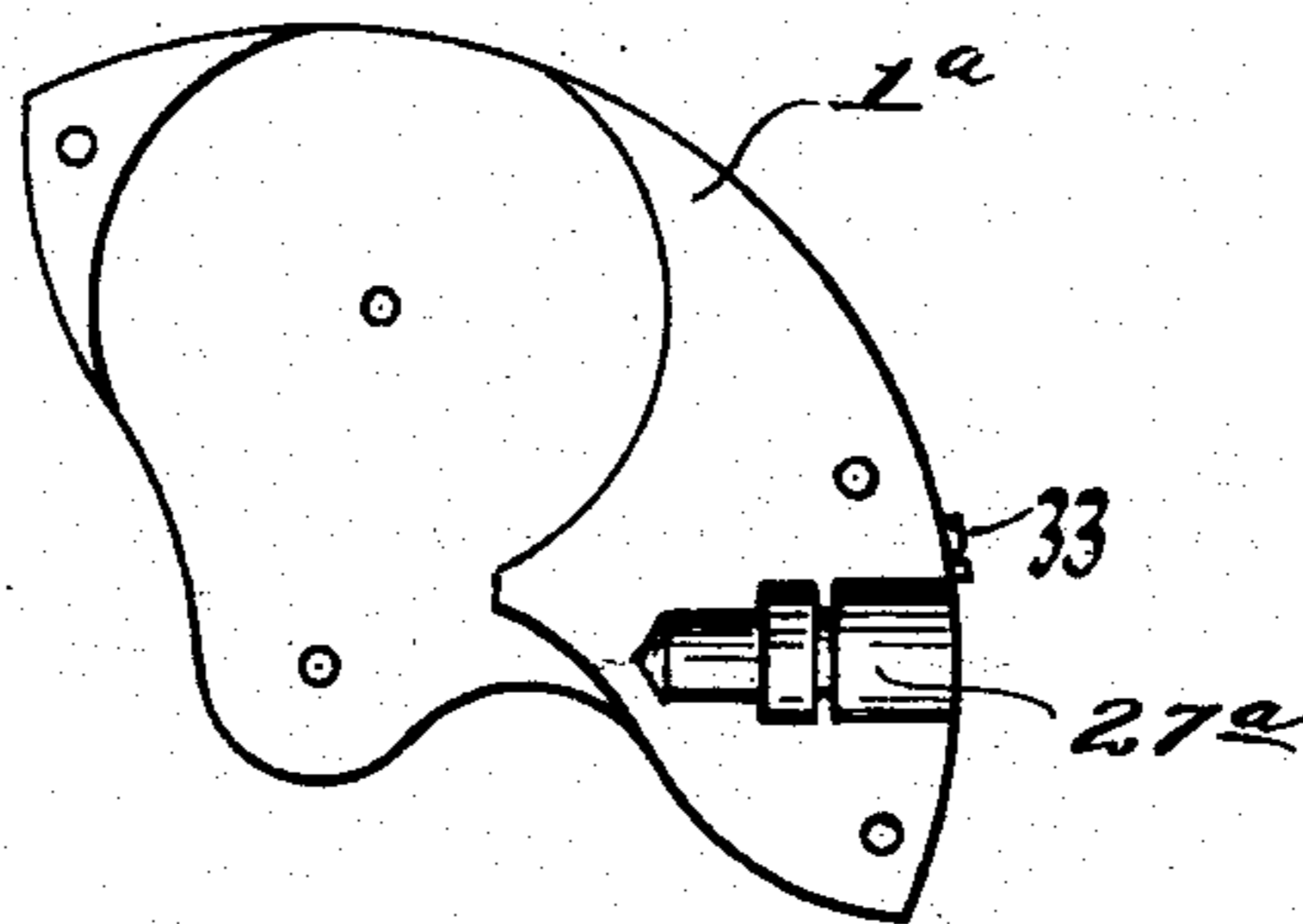


Fig. 12.



WITNESSES:

William Miller
Chas. E. Peusgen

INVENTOR

Abraham Anzelewitz

BY

Hauff & Hauff

ATTORNEYS

UNITED STATES PATENT OFFICE.

ABRAHAM ANZELEWITZ, OF NEW YORK, N. Y.

STEM-WINDING WATCH.

SPECIFICATION forming part of Letters Patent No. 677,151, dated June 25, 1901.

Application filed July 13, 1899. Serial No. 723,722. (No model.)

To all whom it may concern:

Be it known that I, ABRAHAM ANZELEWITZ, a citizen of the United States, residing at Manhattan, in the city, county, and State of New York, have invented new and useful Improvements in Watches, of which the following is a specification.

This invention consists in certain novel details of construction set forth in the following specification and claims and illustrated in the annexed drawings, in which—

Figure 1 is a plan view of the watch-movement. Fig. 2 is a section along $x x$, Fig. 1. Fig. 3 shows a modification. Fig. 4 is a detail sectional view of Fig. 3. Fig. 5 shows two views of a transmission-piece. Fig. 6 is an edge view of the movement. Fig. 7 shows two views of a modification in the transmission-piece. Fig. 8 is an inverted plan view of Fig. 1. Fig. 9 is a detail view. Fig. 10 is an edge view of Fig. 9. Fig. 11 is a plan of the supporting-plate 1, hereinafter described. Fig. 12 is an inverted plan of an auxiliary plate or bridge-piece 1^a, that is detachably secured to the under side of a portion of the main supporting-plate.

In the drawings is shown a plate 1 of a watch-movement having a cut-out portion or seat. A filling-plate 3, Figs. 1, 2, and 3, is made to sit or has a depending portion or flange made to fit or sit into this cut-out. This plate 3 carries three bridges 5, 6, and 7, Figs. 1, 8, 9, and 10. The bridge-piece 5, in connection with plate 3, forms bearings for the axle or staff of the balance-wheel 8. The bridge-piece 6, with plate 3, carries the fulcrum of the lever or anchor 9, Figs. 8, 9, and 10, and between the bridge-piece 7 and plate 3 is mounted or journaled the escapement 10. By removing plate 3, with bridges 5 to 7, including escapement-movement 8 to 10, the escapement can be readily finished or repaired, after which the plate or inset 3 can be replaced in the watch-movement. A screw or fastening 11, Fig. 3, can be made to secure inset 3 and to hold or set the pinion on the axle of escapement-wheel 10 into proper mesh or adjustment with the train-wheel 12, Fig. 8. The plate 1 being suitably recessed or sunk for seating the screw 11, the latter will not project or interfere with the watch-movement or plate 1 being put in its case. I would have

it understood, however, that I make no claim to the removable escapement mechanism nor to its inset plate.

The watch is shown with pendant winding and setting arrangement. The winding and setting mechanism is formed by yoke 14, Fig. 1, having intermediate wheel 15 engaging winding-wheel 16 and setting-wheel 17. This mechanism is normally in winding position, as the spring 18 tends to hold winding-wheel 16 to the winding gear or drum 19 and to keep the setting-wheel 17 out of action or clear from the dial or hand wheel 20. A lever 21 is shown with three arms 21^a, 21^b, and 21^c. When the lever-arm 21^a acts against the yoke 14 with sufficient force to overcome the action of spring 18, the setting-wheel 17 is brought into action, and the winding-wheel 16 is now idle, as seen in Fig. 1. This lever-arm 21^a is exposed to the pressure or action of spring 22, which forms practically an arm of lever 23, fulcrumed at 24. The lever-arm 23 has a projecting piece 25, and when the watch-movement is put in the case the lever-arm or spring 22 is pressed inward, and being stronger than spring 18 this spring 22 will move the yoke 14 to setting position. The lever-arm 21^b sits against shoulder 26 of a transmission piece or stem 27, Fig. 5, having a non-circular seat 28, Fig. 6, to which is fitted the stem 29, Fig. 2, having the button or crown 30, so that rotation of stem 29 is communicated to transmission-piece 27. When the button 30 is pressed inward with the transmission-piece 27, the latter, by its shoulder 26, acts on lever-arm 21^b to move lever-arm 21^a against the action of spring 22 or away from yoke 14. The yoke being now free from lever 21 is moved by spring 18 to normal or winding position. When the stem 29 is drawn or snapped outward to relieve the arm 21^b, the spring 22 moves lever-arm 21^a, with yoke 14, to setting position.

When the watch-movement is taken out of the case, the lever 23 or its nose 25 is freed from confinement against the case. At the same time, the stem 29 remaining in the case, the transmission-piece 27 and lever 21 are freed from such stem 29. The spring 31, acting against the third lever-arm 21^c, now moves the lever-arm 21^a away from yoke 14, leaving the latter free to move to normal or winding

position under the influence of spring 18. When the watch-movement is out of the case, it is thus in winding position and in condition for being suitably regulated, as the spring or train, or, rather, the hand-wheel 20, is free from the gears 17 15 16.

The transmission-stem 27 engages or rotates a gear 32, which engages yoke-gear 15. The rotation of button 30 and stem 27 is thus transferred to gear 32 and thence to gear 15.

The transmission-piece 27, it is noted, has but one shoulder 26, which sits outside of lever-arm 21^b. When the watch-movement is out of the case or clear of stem 29, the transmission-piece 27 can be slipped out of its seat 27^a without disturbing the lever 21. This seat 27^a for the transmission-piece 27 is formed partly in the main plate 1, as shown in Fig. 11, and partly in the detachable piece or plate 1^a, Fig. 12, which is secured to a portion of the under side of said main plate.

Loss or accidental removal of the transmitter 27 can be prevented by a lock or screw 33, Fig. 6, having its head projected into or partly across the seat of the transmitter. A mutilated head for screw 33 is practical, as in that case a partial turn of the screw will suffice to bring the cut or the complete part of the screw-head to the seat of piece 27 to release or confine the latter. Of course the piece 27 is rotatable and has enough play to respond to the longitudinal movements of the stem 29. The seat 28 and piece 27 are of such length that in case independent longitudinal movement of these parts occurs at any moment the engagement of piece 27 with stem 29 or with gear 32 is not broken.

The device can be modified. In Fig. 7 the transmission-piece 27 engages or sits through a gear 32', having seats or sleeves 34 and 35, the piece 27 having a pin 36, preventing this piece being moved out of gear 32', while free to move longitudinally independently of this gear. Said gear 32' engages the yoke-gear 15 the same as the gear 32.

In Fig. 3 the lever-arm 23 has no projecting piece 25; but an eccentric 25' when set or having its high part bearing against the arm 23 to move spring 22 inward will cause such spring to move the yoke to setting position the same as when the case confines the piece 25 in inward position. The eccentric 25' is practically connected to or forms part of the shank of one of the screws or heads 37, Fig. 4, serving to secure the plate 1 in the case. The construction shown is such that when the head 37 is turned to fastening or locking position the eccentric 25' is moved to hold spring 22 and lever 21 to yoke 14, so that the latter moves to setting position. The movement is thus in winding position no matter whether in the case or out of the case and is not brought to setting position until the fastening 37 is moved to locking or engaging position.

The springs 22 and 31, as seen, act in opposite directions, one of the springs tending

to move lever 21 into action or toward yoke 14 and the other spring being made to move the lever out of action. Each of these springs engages its respective lever-arm 21^a or 21^c.

In the construction shown it is noted that the change mechanism, comprising the lever 21, with springs 22 and 31, and arm 23, is located on one side of plate 1 or directly under the dial-plate. A mere removal of the dial thus makes the change mechanism visible and accessible, so as to facilitate repairs, cleaning, and adjusting.

Since only one shoulder, as 26, is required to actuate the lever 21, any stem with a shoulder, such as found in the market already adapted to cases, can serve to wind and set without using the transmission-piece 27. When the transmission-pin 27 is removed, its seat 27^a in plate 1 and piece or plate 1^a give access to such a case-stem as just described.

When the spring 22 moves lever 21^a to the winding and setting mechanism 14, the spring 31 is thereby put under tension or its tension is increased, so that when the lever is again free from the action of spring 22 the spring 31 will promptly move such lever out of action or relieve the yoke 14 from the action of such spring.

What I claim as new, and desire to secure by Letters Patent, is—

1. A stem winding and setting mechanism having a transmission-piece 27 provided with a single shoulder, a lever engaging said shoulder only at the inner side or face and leaving the transmission-piece free to be removed from the mechanism without disturbing the latter, and springs 22 and 31 both made to directly engage the lever, one of the springs being made to throw the lever to the shoulder and the other to throw the lever from the shoulder, substantially as described.

2: A winding and setting mechanism, a spring for normally holding the mechanism in winding position, a lever, and springs separate from the first-named spring and made to engage the lever to respectively move the latter into and out of action, substantially as described.

3. A winding and setting mechanism normally in winding position, a lever, springs for actuating the lever in opposite directions, and an actuating-piece 23 made to move one of the springs to carry the lever and mechanism to setting position when the movement is in the case substantially as described.

4. A winding and setting mechanism, a spring for said mechanism, a lever, springs independent of the first-named spring for actuating the lever in opposite directions, and an actuating-piece 23 made to move one of said springs to carry the lever mechanism to setting position and at the same time increase the tension of the other spring, substantially as described.

5. A watch-movement having a winding and setting mechanism normally in winding

position, and a fastening 37 for securing the movement in the case and for bringing the movement into setting position substantially as described.

5 6. A winding and setting mechanism and a three-armed actuating-lever, combined with a transmission-piece made to engage one of the lever-arms, and two oppositely-acting springs made to respectively engage the other
10 two lever-arms substantially as described.

7. A winding and setting mechanism, an actuating-lever therefor, a transmission-piece and oppositely-acting springs made to engage the lever, an arm 23 for bringing one of the
15 springs into action, and a fastening 37 for

actuating said arm 23, substantially as described.

8. A winding and setting mechanism and an actuating-lever therefor, combined with a swinging piece or arm 23 and a spring for 20 moving the lever to bring the mechanism to setting position, and a fastening 37 for actuating said arm 23, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing 25 witnesses.

ABRAHAM ANZELEWITZ.

Witnesses:

WM. C. HAUFF,

E. F. KASTENHUBER.