

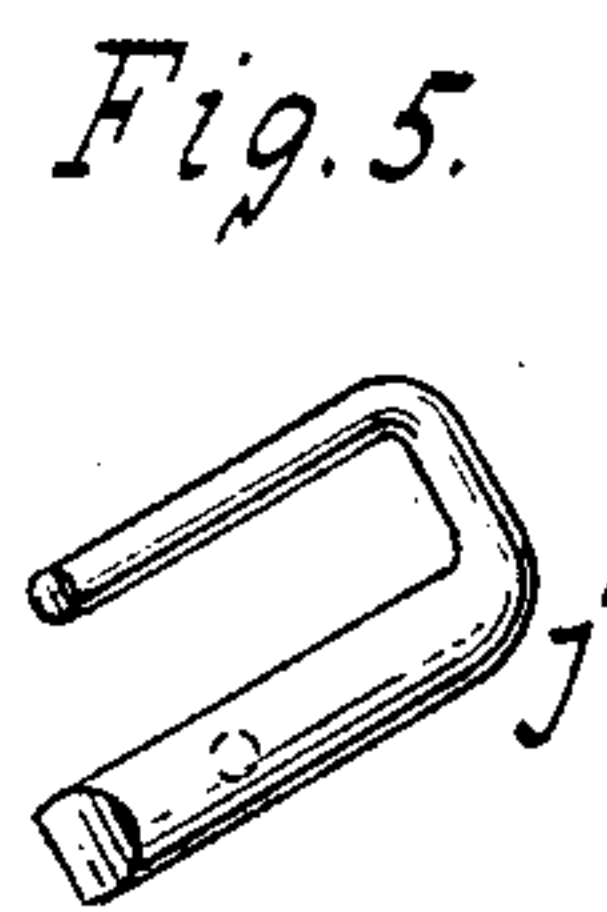
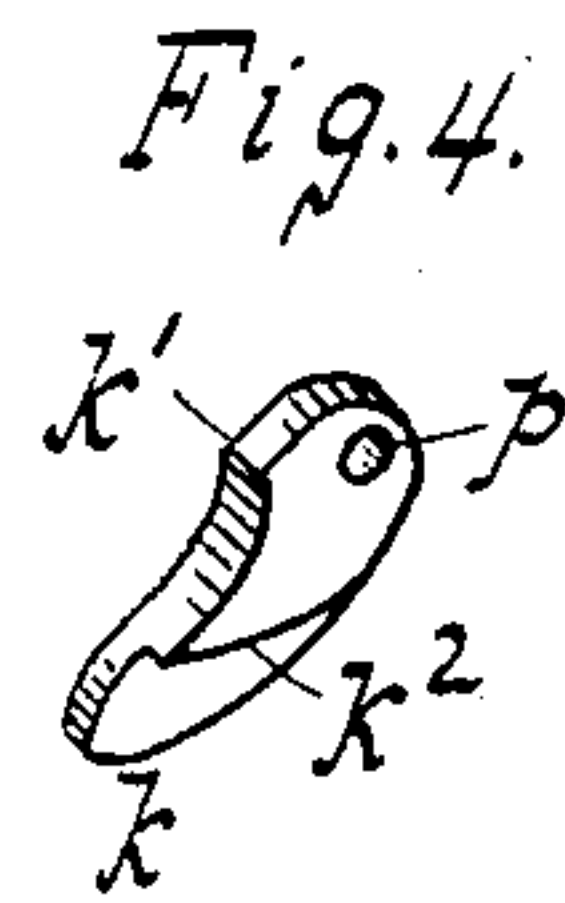
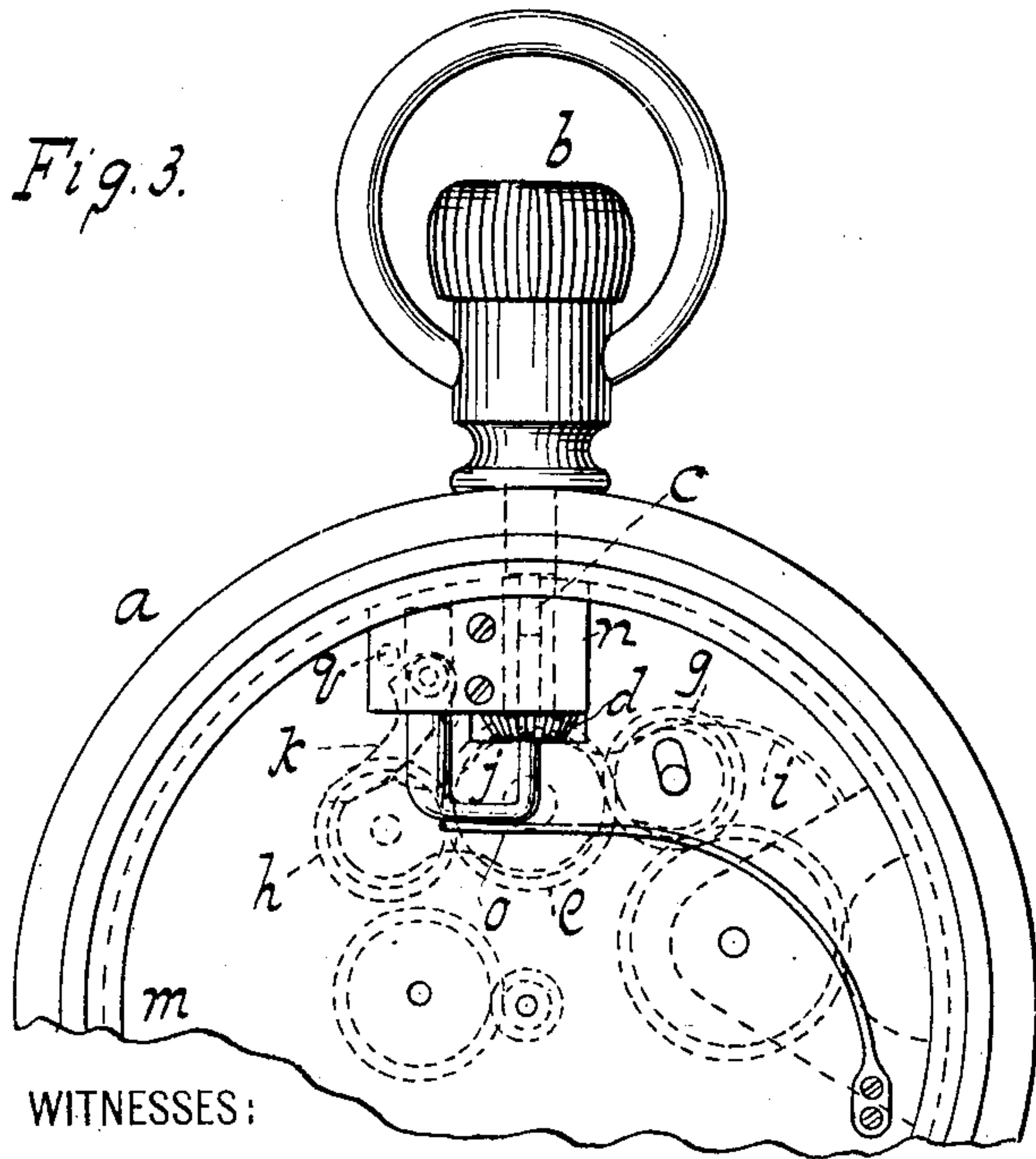
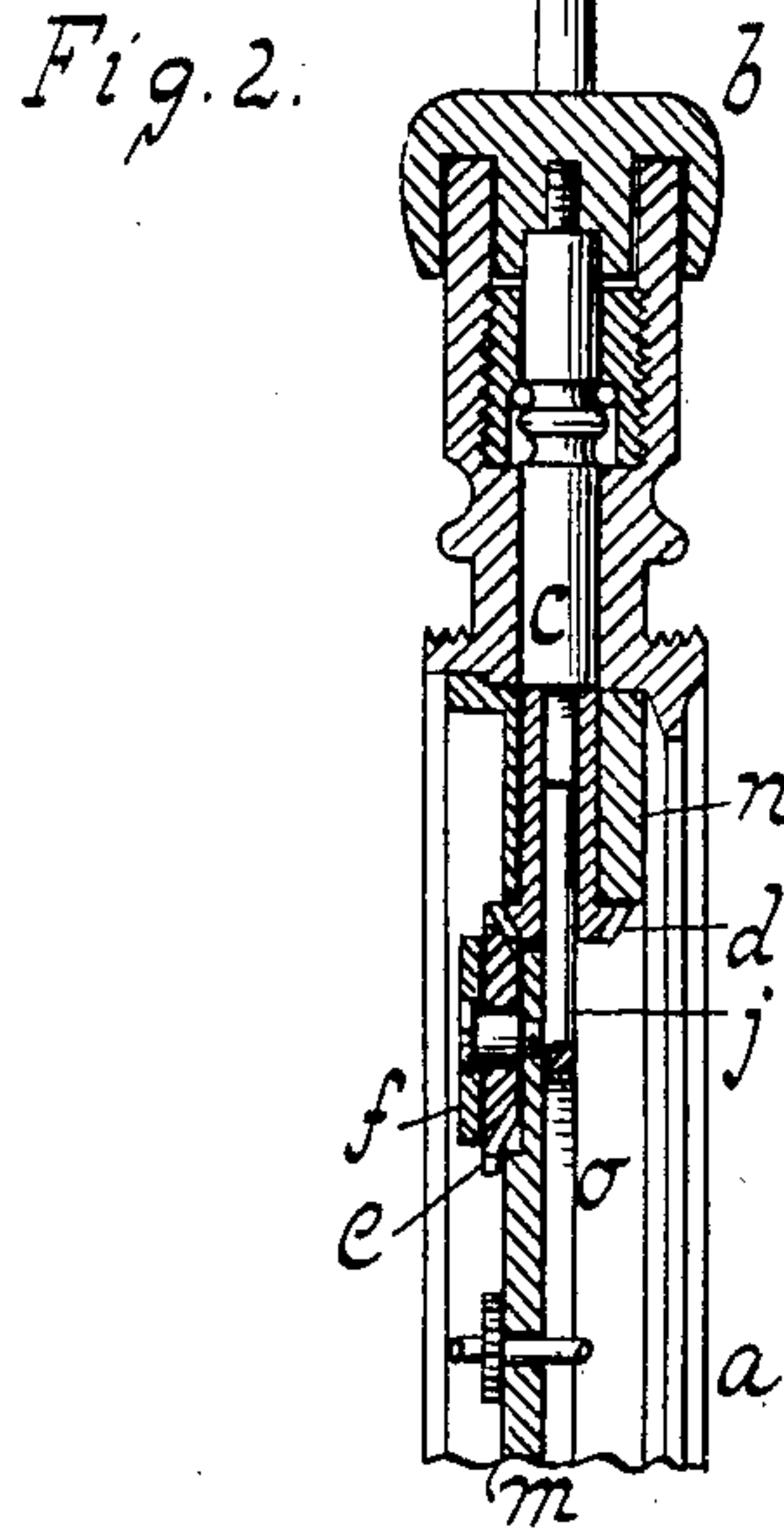
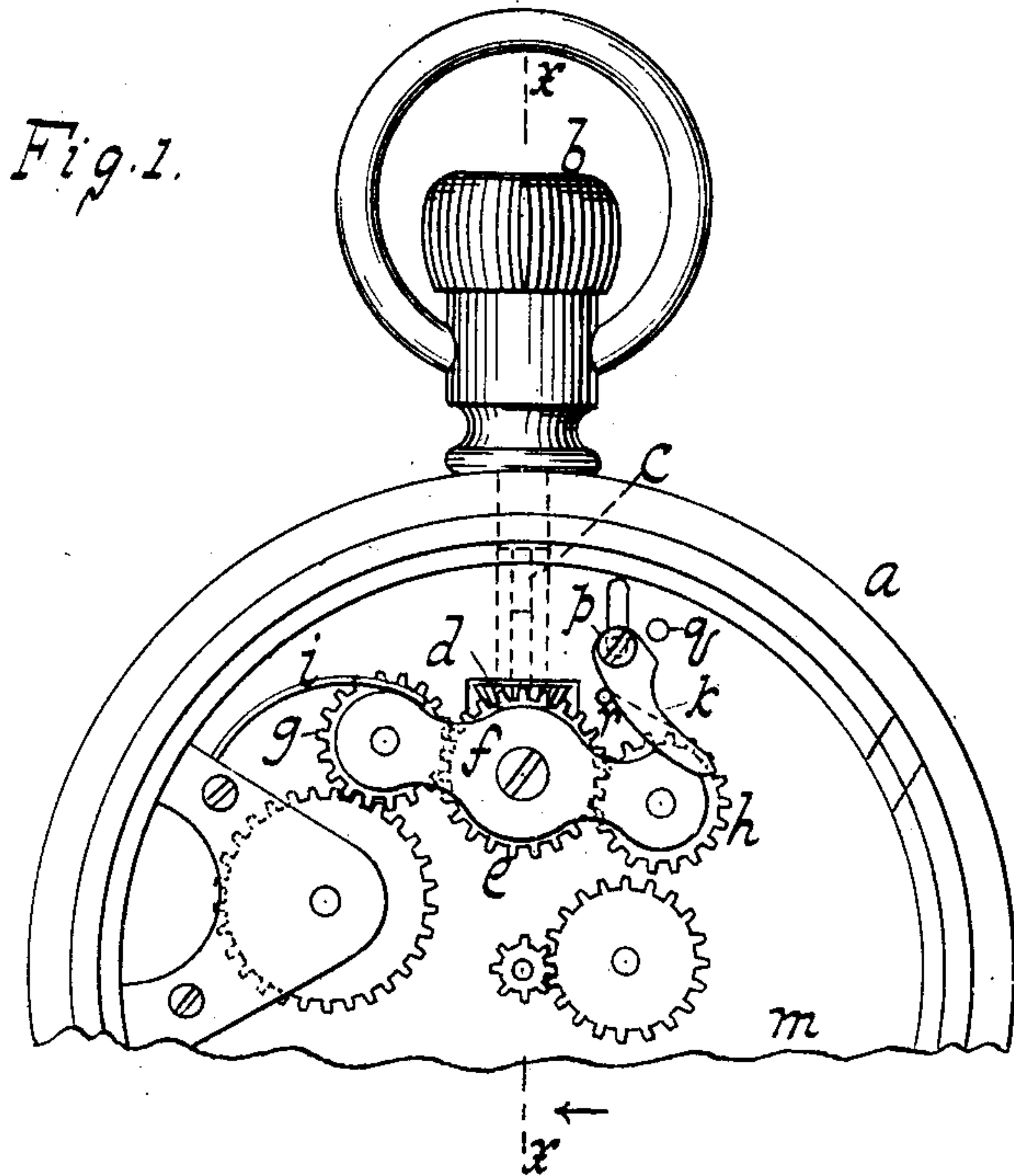
No. 754,407.

PATENTED MAR. 15, 1904.

A. ANZELEWITZ.
STEM WINDING WATCH.
APPLICATION FILED APR. 11, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



WITNESSES:

William Miller
Chas. E. P. Engle.

INVENTOR

Abraham Anzelewitz
BY *W. C. Hauff*
ATTORNEY

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Fig. 6.

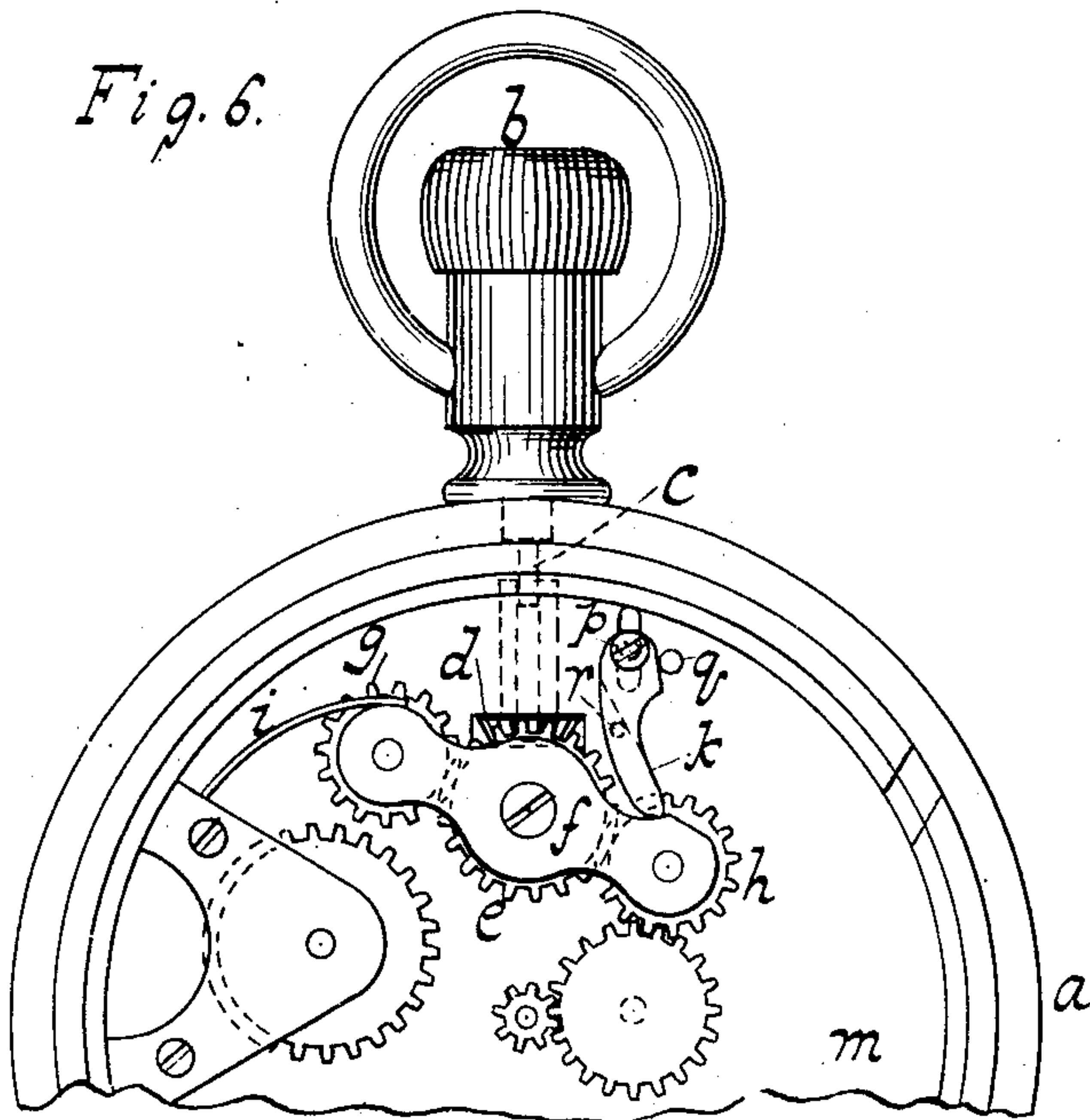


Fig. 8.

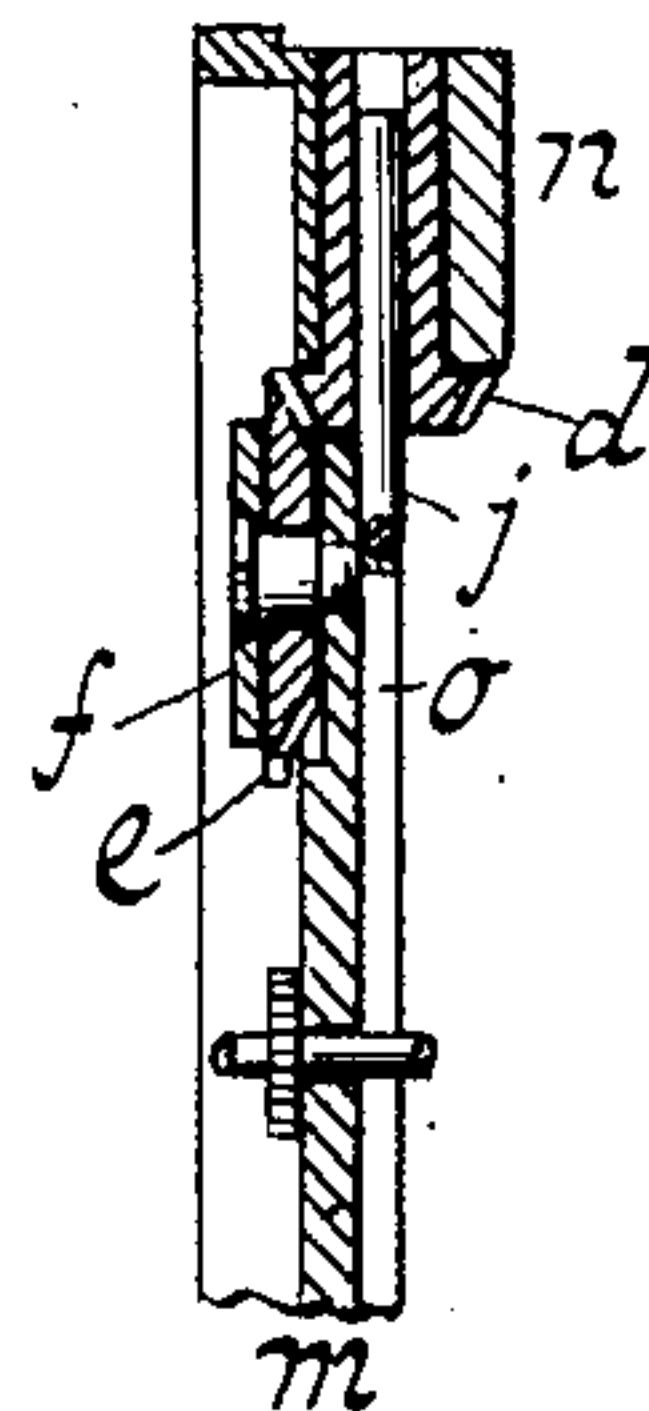


Fig. 7.

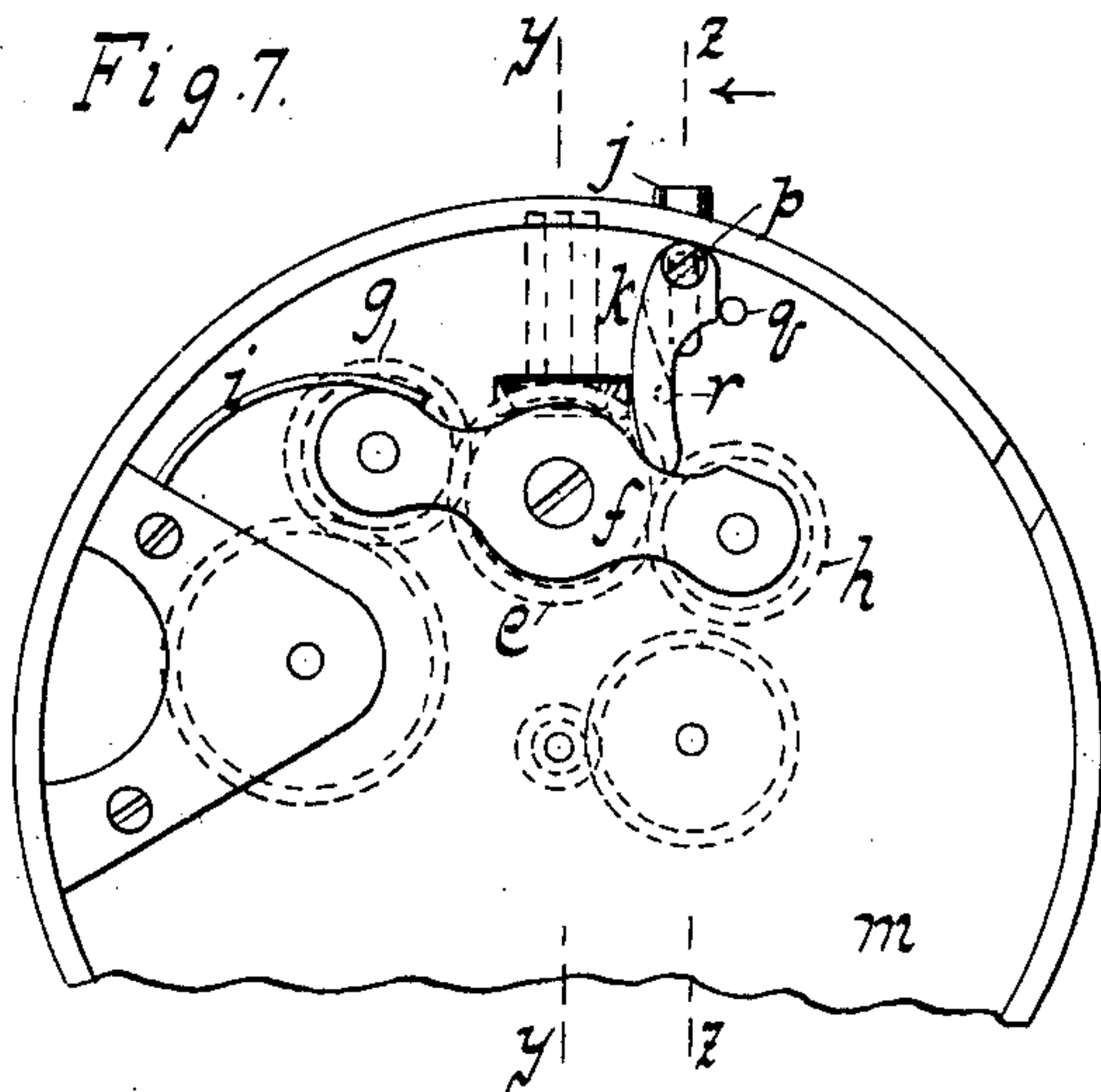


Fig. 9.

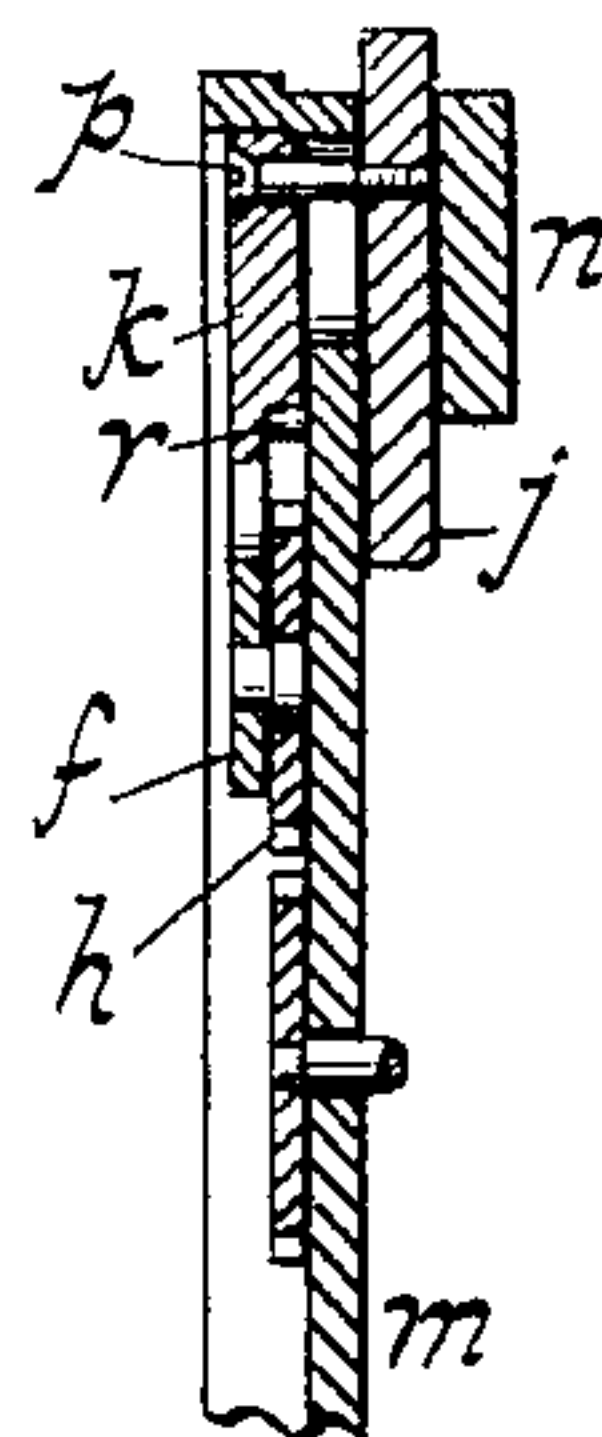


Fig. 10.

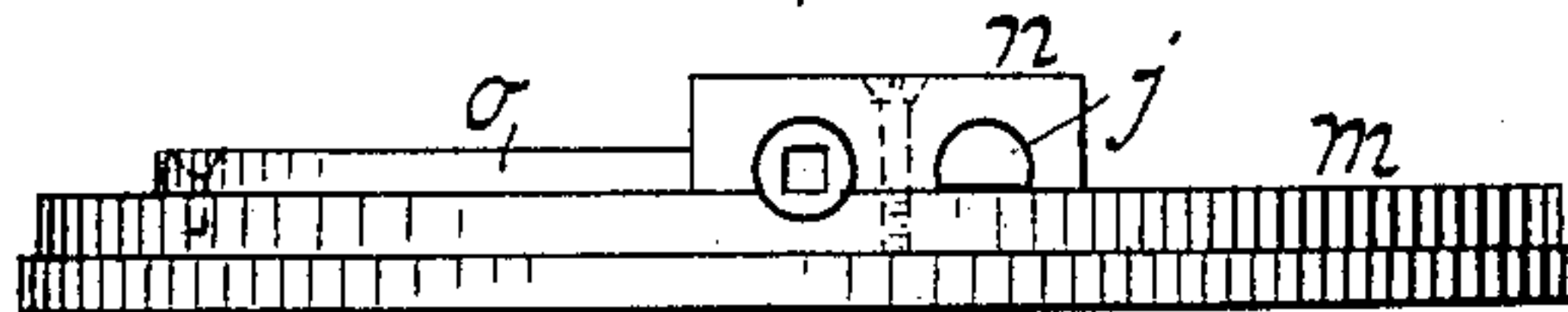
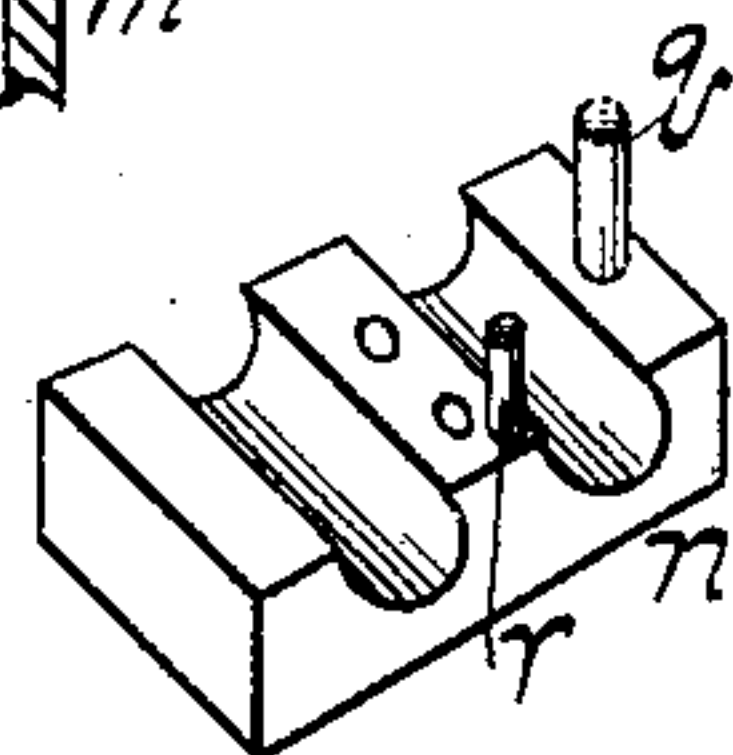


Fig. 11.



WITNESSES:

William Miller
Chas. E. P. Kussler

INVENTOR

Abraham Anzelewitz

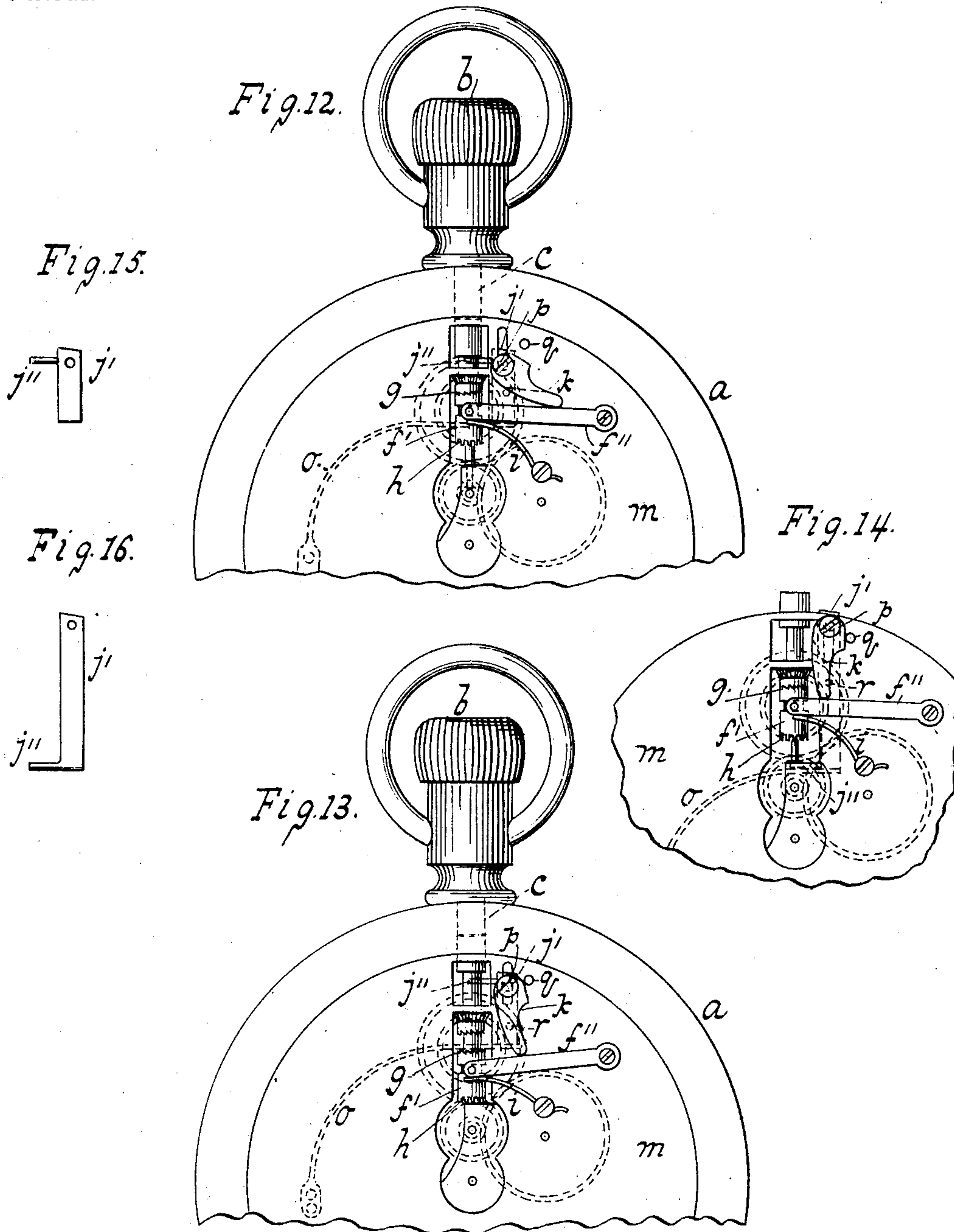
BY

W. C. Hauff
ATTORNEY

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3 SHEETS—SHEET 3.



WITNESSES:

William Miller
Chas. E. Deussger

INVENTOR

Abraham Anzelewitz

BY

W. C. Hauff

ATTORNEY

UNITED STATES PATENT OFFICE.

ABRAHAM ANZELEWITZ, OF NEW YORK, N. Y.

STEM-WINDING WATCH.

SPECIFICATION forming part of Letters Patent No. 754,407, dated March 15, 1904.

Application filed April 11, 1903. Serial No. 152,201. (No model.)

To all whom it may concern:

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

This invention relates to a stem-winding watch or to mechanism enabling a stem-winding feature to be readily applied to a watch; and the invention resides in the novel construction set forth in the following specification and claims, and illustrated in the annexed drawings, in which—

Figure 1 shows a stem-winding watch embodying the features of this invention and with the parts in winding position or with the stem pushed or snapped inward, as is usual when the watch is being carried in the pocket. Fig. 2 is a section along $x x$, Fig. 1. Fig. 3 is a rear view of Fig. 1. Fig. 4 shows a lever. Fig. 5 shows a carrier or shifter. Fig. 6 shows the parts of Fig. 1 in setting position or with the stem pulled or snapped outward. Fig. 7 shows the watch-movement out of the case, as for cleaning or repairing, and the mechanism in winding position. Fig. 8 is a section along $y y$, Fig. 7. Fig. 9 is a section along $z z$, Fig. 7. Fig. 10 is an edge view of Fig. 7. Fig. 11 shows a block or bridge piece with guides. Fig. 12 shows a modification with parts in winding position. Fig. 13 is a view like Fig. 12, the parts being in setting position. Fig. 14 shows the parts out of the case. Figs. 15 and 16 show details.

The case of the watch is shown at a . The button b has stem c , which is rotatable and can be snapped in and out for the winding or setting positions. The stem engages the winding pinion or arbor d , engaging pinion or gear e of the winding and setting mechanism, (shown in form of a yoke f with winding and setting gears g and h .) The spring i has a tendency to normally hold the parts in winding position or with the gear g in mesh and gear h running idle. As the gear-setting lever k is shifted by the carrier j to one position or another, the change from winding to setting or the reverse is secured. A conven-

ient form of carrier is approximately U-shaped or with two branches, one of which carries the fulcrum p of lever k and the other of which contacts with or is actuated by the stem. One branch of the carrier is shown of reduced diameter, so as to pass through the pinion or arbor d to contact with the stem c , which slides or extends into the pinion and imparts rotation thereto. The other branch of the carrier can be thicker and is shown with a flat portion or face adapted to sit against or slide in and out on movement plate m .

The block or bridge piece n is shown with suitable bearings or seats, and when secured to the movement-plate the carrier can slide or shift and the pinion d or its arbor can rotate between such block and plate.

The spring o , Fig. 3, acts upon the carrier or shifter j to move the same outward or follow the stem when snapped outward, while the inward snap of the stem slides or forces the carrier inward.

As already noted, the fulcrum or pivot p of the lever k is shiftable or moves in and out with the carrier j . The guides or pins q and r serve to impart a swing to the lever or cause the latter to turn on its fulcrum or its free end to move laterally as the fulcrum is shifted. In other words, the lever has four movements, a bodily movement as the fulcrum moves and also a swing or back-and-forth movement on the pivot or fulcrum. When the stem is moved out, the fulcrum shifts to carry the lever to guide pin q and swing the lever to the yoke or gears to shift the setting-gear into action, as shown in Fig. 6. On forcing the stem inward the fulcrum is shifted to carry the lever against the guide-pin r and swing the lever into position for the spring i to move the parts to normal or winding position, Fig. 1.

As seen in Fig. 4, the lever is shaped to make the proper contact with the guide-pin as the fulcrum is shifted. The under part of the lever has a cam or inclined cut or shoulder which in contact with or on sliding along pin r swings the lever to one side. The lever portion for contacting with pin q can be formed as a shoulder or enlargement k' , while the cam or curve is indicated at k'' , Fig. 4.

The pins q r could be fixed or riveted to the

movement-plate or carried by the block-piece *n*. In the latter case the plate need only be cut or bored sufficiently for the pins to project therethrough.

5 The construction shown has been found to work easily and satisfactorily. The carrier being made to shift or slide rectilinearly and move or shift the lever-fulcrum in a direction parallel to or corresponding to the stem, the
10 movements of the latter being communicated to the carrier will shift the fulcrum, as described, and the fixed guides cause the lever to swing on the shifting fulcrum.

The bridge or bearing piece *n*, with its parts
15 *d* and *j* and guides *q* *r*, can be used to convert a watch of any construction from so-called "lever-set" to pendant-set. This bridge-piece being screwed or secured to the movement-plate, the carrier or shifter *j* is in position to contact with or be actuated by stem *c* when the
20 works are put in the case. When out of the case, as seen in Fig. 7, the carrier is free from restraint and is moved out sufficiently to carry the lever *k* into position to allow the
25 mechanism to move to its normal or winding position.

Of course the invention is not confined to the conversion of lever-set into pendant-set devices; but it has been found useful for such
30 purpose.

The above invention can be readily applied to any construction of watch or timepiece and applied in connection with any stem.

In Fig. 1 the winding and setting mechanism
35 *f g h* is shown in so-called "yoke" form; but manifestly the invention includes other mechanism, such as the well-known sliding pinion *f'*, Fig. 12, with winding-teeth *g* and setting-teeth *h*. The slide or carrier *j'*, as before,
40 extends into contact with a stem *a* or arbor, and when the carrier is pressed inward the lever *k* is swung so as to clear the second lever *f''* for spring *i* to move the winding-gear *j* into engagement. On snapping the stem out-
45 ward and causing lever *k* to move the parts *f''* and *f'* inward the winding-teeth *g* are moved clear or to idle position and the setting-teeth *h* come into mesh.

The carrier *j* is given any suitable form as
50 required—for example, a U shape, as seen in Fig. 5, or an L shape or any other shape, Figs. 15 and 16, as required—according to the movement. The lever is suitably fulcrumed to the carrier or connected at such point as
55 required.

The carrier *j'* in Figs. 15 and 16 is shown with a part *j''*, adapted to contact with the arbor or stem.

The plate *m* being suitably slotted allows
60 the fulcrum *p* to extend therethrough to connect the lever *k* and carrier *j*, located opposite to one another or on opposite sides of plate *m*.

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

65 1. A stem-winding watch having a gear-

setting lever, and a carrier made to carry and shift the lever and actuating mechanism for the carrier to cause the latter to impart motion to the lever.

2. A stem-winding watch having a gear- 70 setting lever with shiftable fulcrum on which said lever turns, and mechanism outside the lever for shifting the fulcrum.

3. A stem-winding watch with a gear-set- 75 ting lever having four movements, a shiftable fulcrum on which said lever turns and actuating mechanism for causing said lever to move automatically as said mechanism is actuated.

4. A stem-winding watch having a stem and 80 a gear-setting lever oscillating on and having its fulcrum shiftable in direction parallel to the stem.

5. A stem-winding watch having a gear- 85 setting lever oscillating on a shiftable fulcrum and guides for the lever placed in the path thereof so as to cause the lever to swing on the fulcrum as the latter is shifted.

6. A stem-winding watch having a gear- 90 setting lever with shiftable fulcrum, means independent of the lever for shifting the fulcrum, and fixed guide for causing the lever to swing on the fulcrum as the latter is shifted.

7. A stem-winding watch having a gear- 95 setting lever with shiftable fulcrum and guides for the lever, said lever having a shoulder and face portion for contacting with one or another of the guides to swing the lever on the fulcrum as the latter is shifted.

8. A stem-winding watch having a winding 100 and setting mechanism normally in winding position, a lever for actuating said mechanism, a carrier, and a shiftable fulcrum for the lever, said fulcrum being mounted on the carrier and said lever and carrier being located 105 opposite to one another.

9. A stem-winding watch having a shiftable carrier in contact with the stem or arbor, and a lever fulcrumed on said carrier and bodily movable therewith, said lever oscillating on 110 said fulcrum.

10. A stem-winding watch having a bridge or bearing piece and a winding pinion or arbor, a carrier in said bridge or bearing, a lever mounted on said carrier, and a guide for 115 the lever, so that as the carrier is moved the guide forces the lever into position to shift the parts.

11. A bridge having bearings, a winding arbor or pinion in one of the bearings, a carrier in another bearing, a lever connected to the carrier, and guides for the lever, said parts being adapted to be attached to a stem- 120 winding watch plate or movement, so as to allow a change from lever-set to pendant-set. 125

12. A stem winding and setting watch having a gear-setting lever, a carrier and a guide for the lever, and a stem or arbor for actuating the carrier, said parts being so arranged that upon the stem being moved away from 130

the carrier the guide forces the lever to shift the parts, and upon the stem being moved farther from the carrier, the lever moves clear of the winding and setting mechanism.

5 13. A stem-winding watch having a stem, a carrier, a spring for holding the carrier against the stem, and a lever for moving the winding and setting mechanism, said lever having its fulcrum mounted on the carrier so as to be nor-
10 mally moved outward by said carrier and spring.

14. A stem-winding watch having a slotted

movement-plate *m*, a carrier at one side of the plate, and a lever at the other side of the plate and having its fulcrum extended through the 15 slot and connected to the carrier so as to be moved when the carrier is shifted.

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

ABRAHAM ANZELEWITZ.

Witnesses:

CHAS. E. POENSGEN,

E. F. KASTENHUBER.