

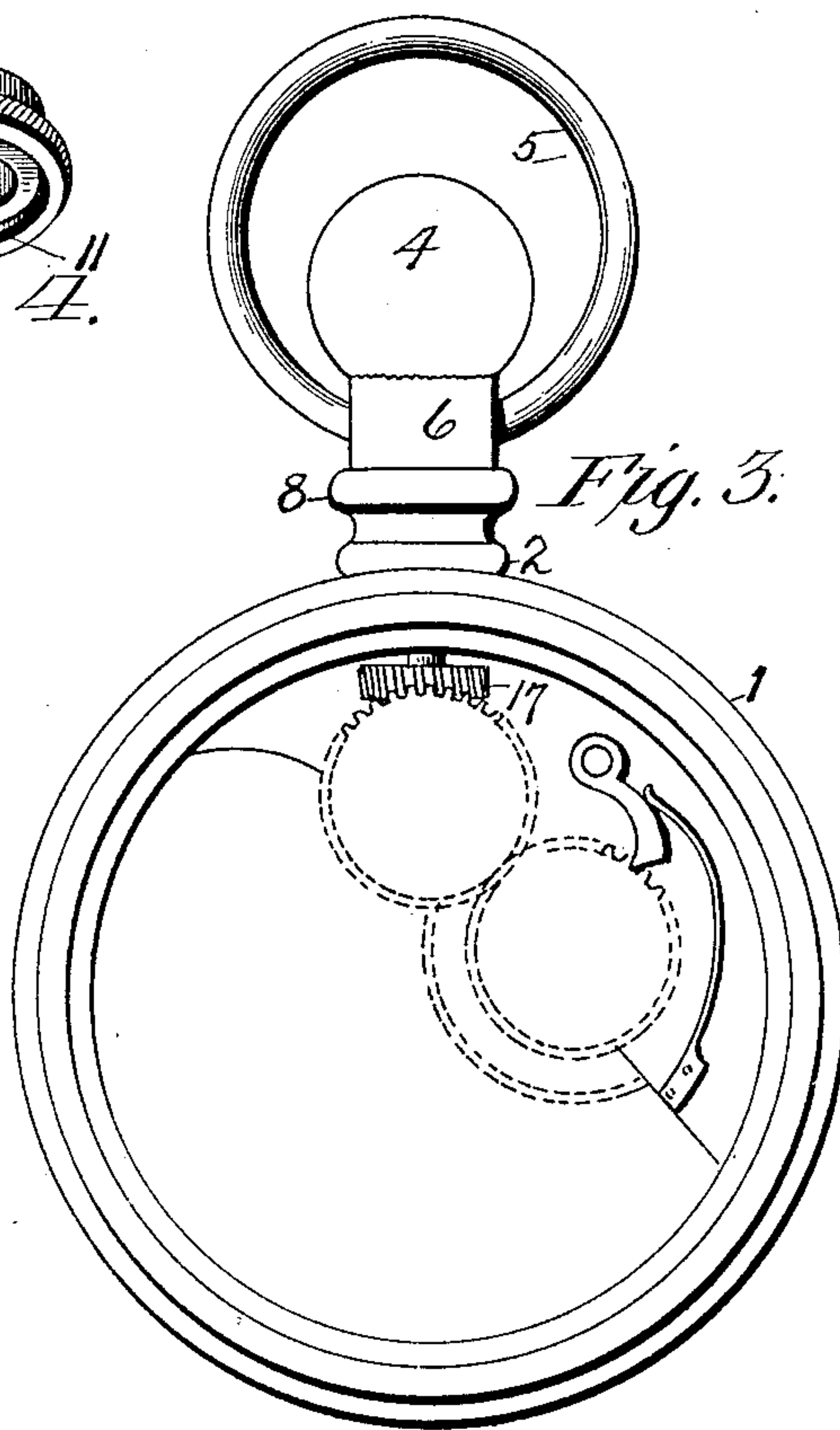
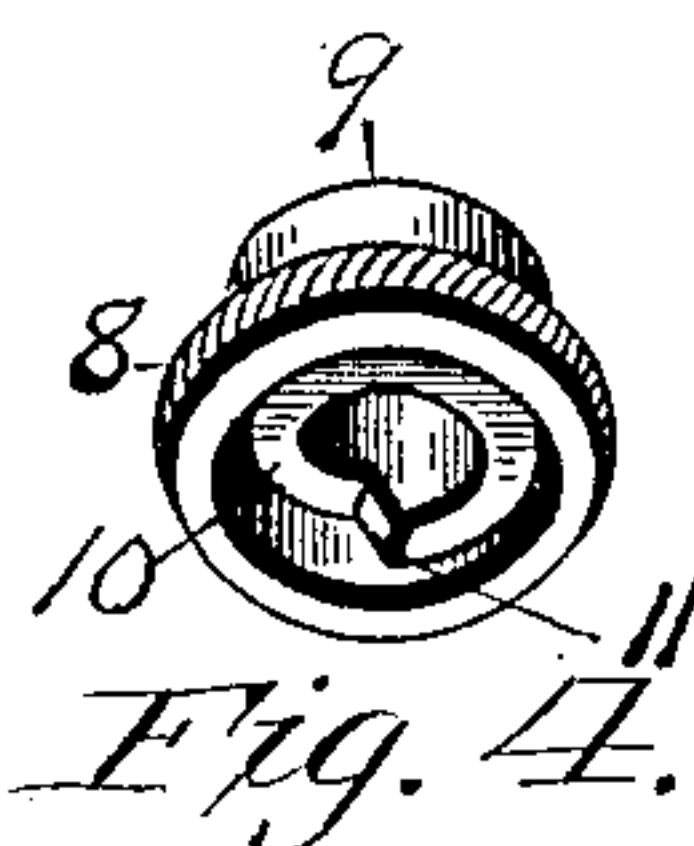
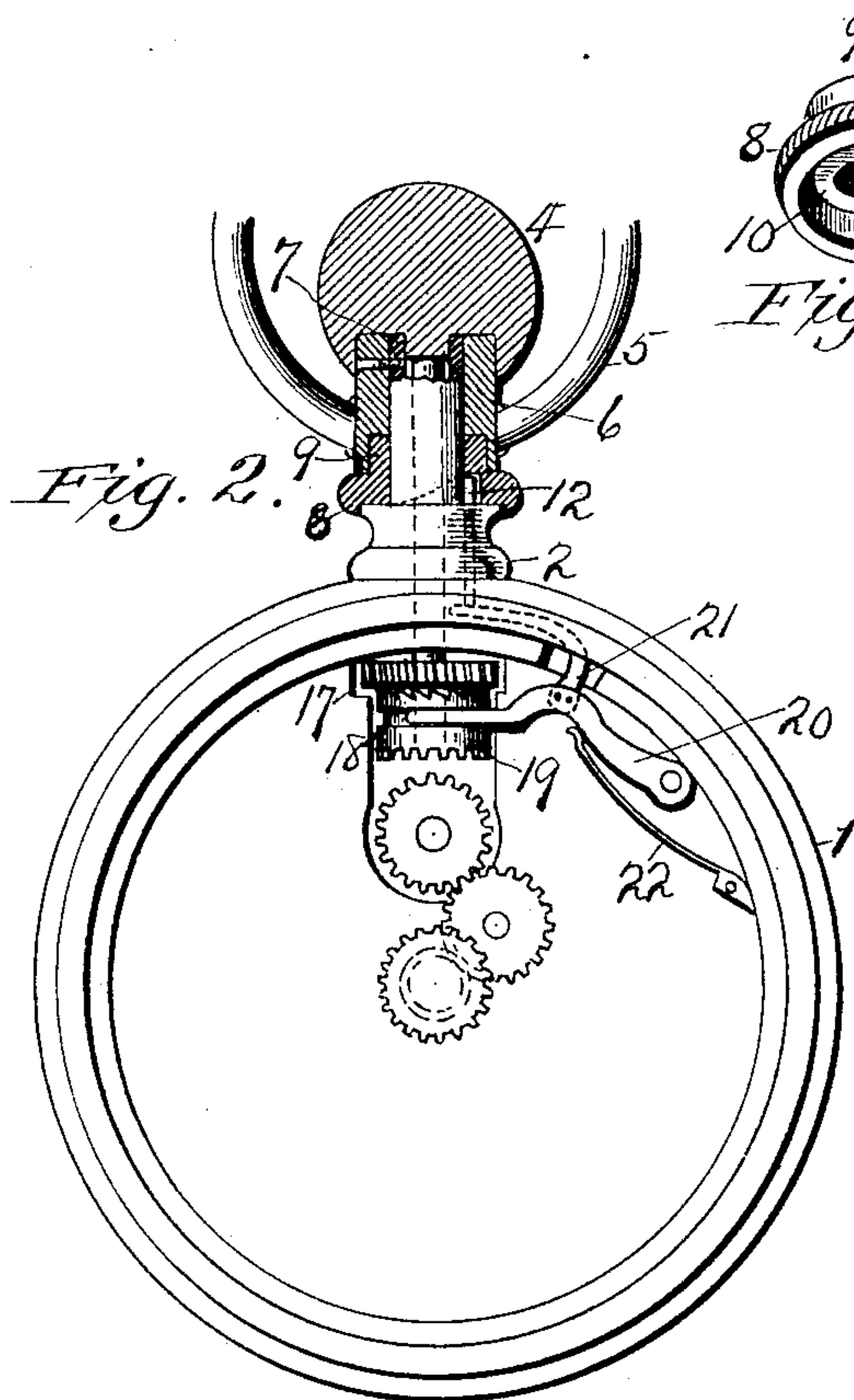
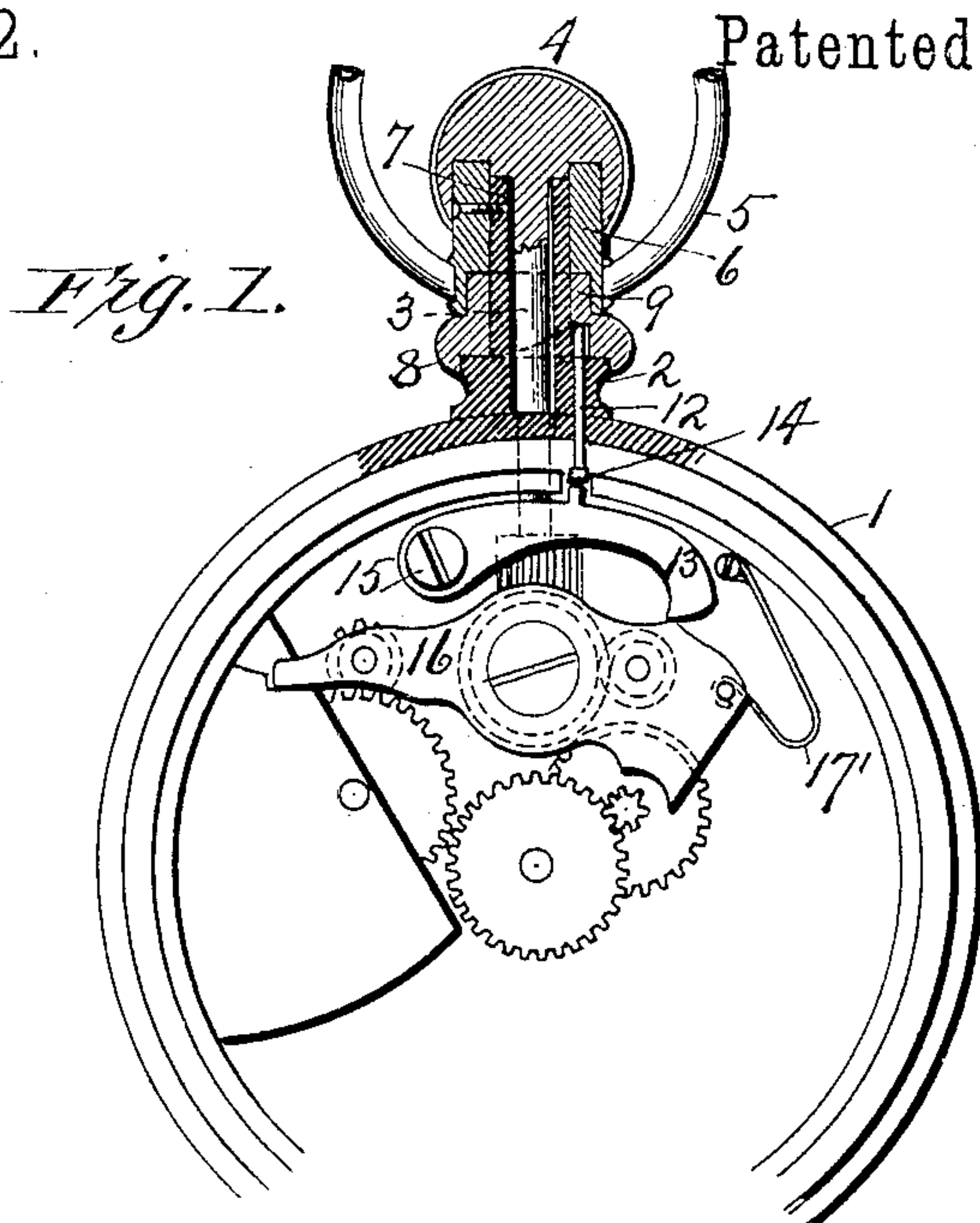
(No Model.)

2 Sheets—Sheet 1.

S. LESNICK.
STEM WINDING AND SETTING WATCH.

No. 598,522.

Patented Feb. 8, 1898.



Witnesses:
L. C. Hills.
Alfred T. Sage.

Inventor:
Samuel Lesnick,
by R. E. Hubbard, Atty.

(No Model.)

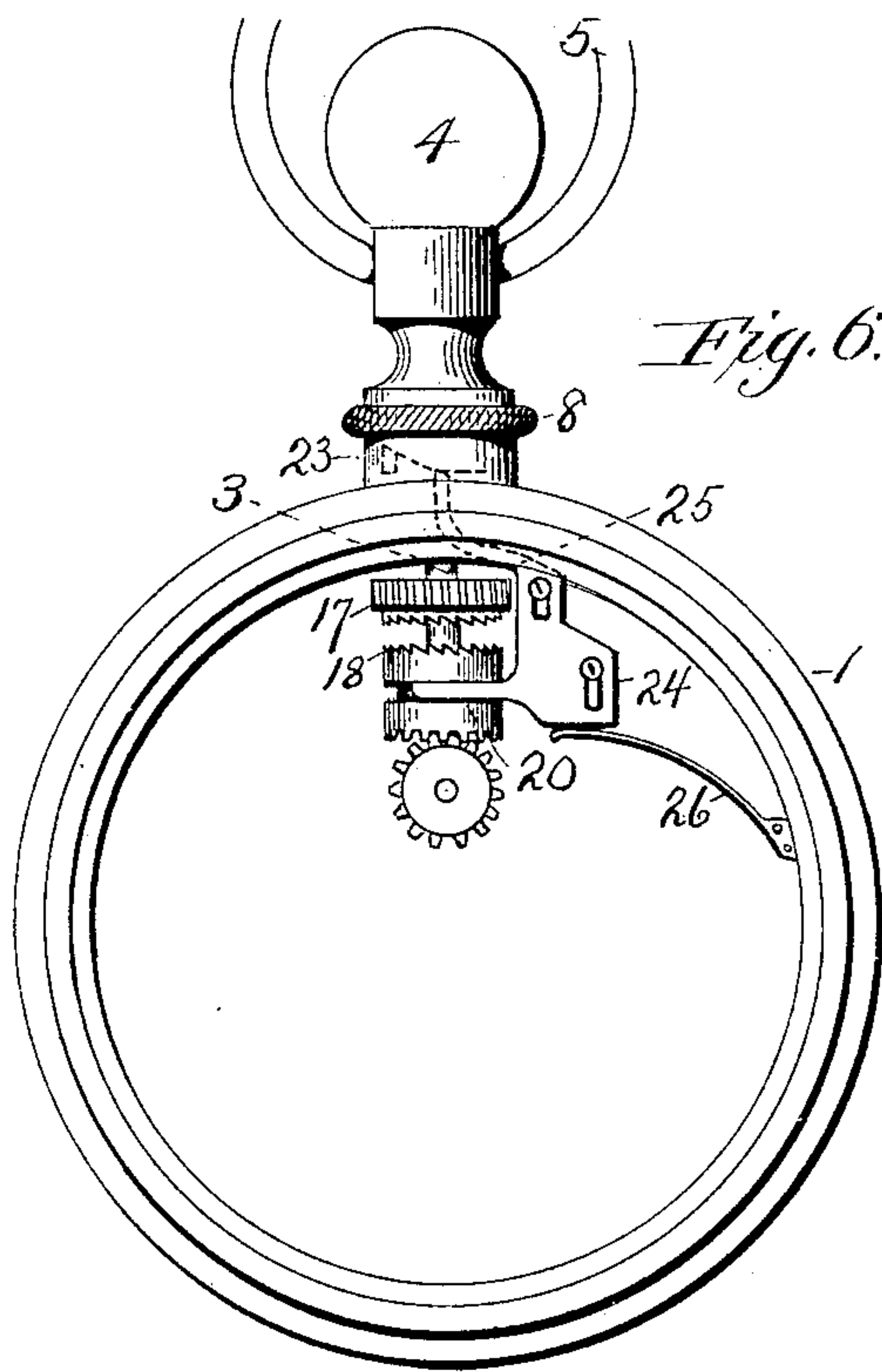
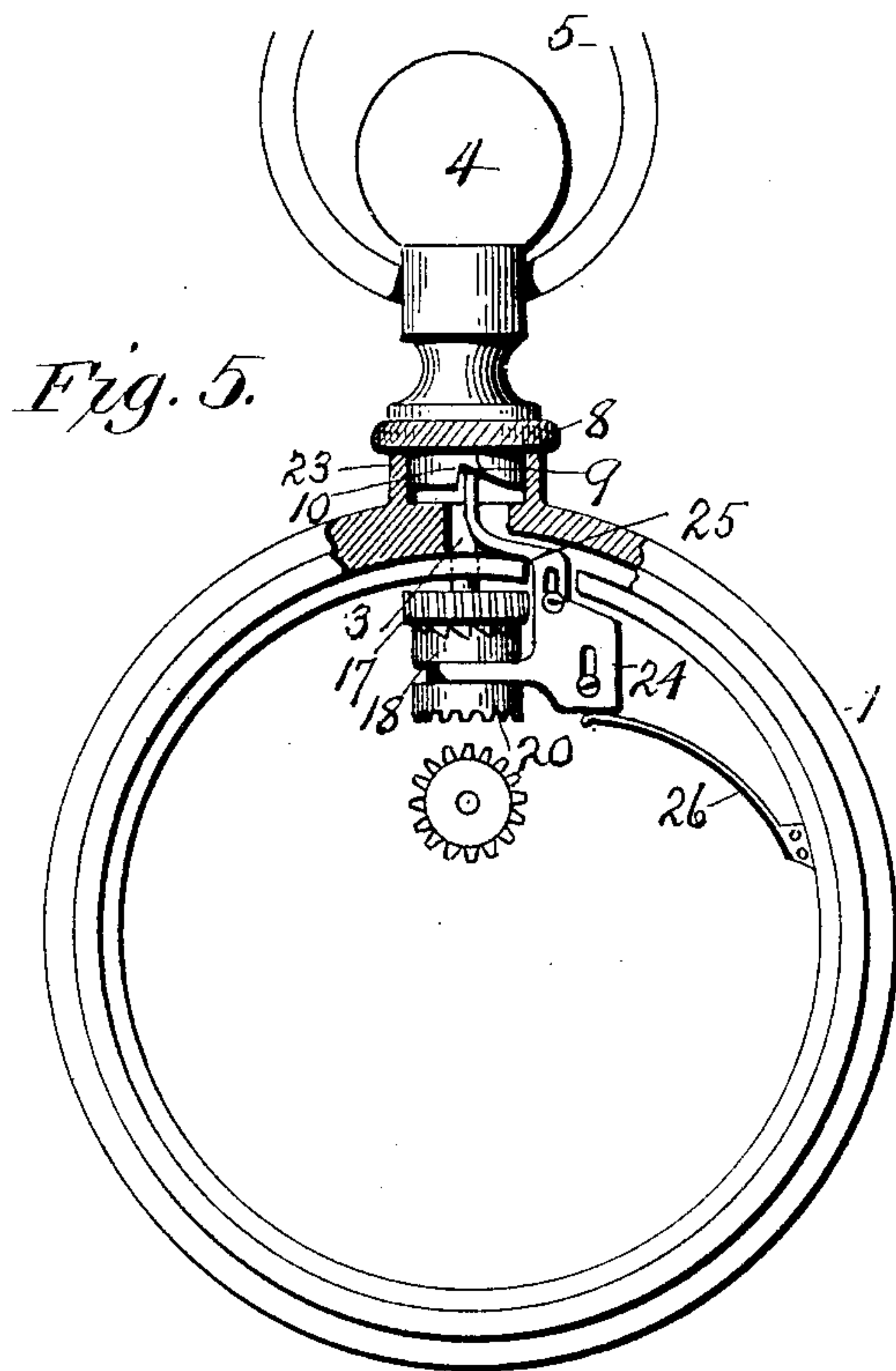
2 Sheets—Sheet 2.

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STEM WINDING AND SETTING WATCH.

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Witnesses:

L. C. Mills.
Alfred T. Gage.

Inventor
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UNITED STATES PATENT OFFICE.

SAMUEL LESNICK, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO MAX CHERWINSKY, OF CAMBRIDGE, MASSACHUSETTS.

STEM WINDING AND SETTING WATCH.

SPECIFICATION forming part of Letters Patent No. 598,522, dated February 8, 1898.

Application filed June 3, 1897. Serial No. 639,243. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL LESNICK, a subject of the Czar of Russia, residing at New York, county of New York, State of New York, have invented certain new and useful Improvements in Stem Winding and Setting Watches, of which the following is a specification.

My invention relates to watches, and particularly to mechanism for setting the hands, and has for its object to provide a simple construction of means by which certain parts of the winding mechanism can be thrown out of operation and certain parts of the hand-setting mechanism into operation when the hands are to be set, and vice versa after the hands have been set and it is desired to throw the winding mechanism into operative connection. The device is of such construction that it can be used in connection with American watches and also with various makes of European watches, it being equally applicable to the several makes without the necessity of changing the parts of the setting and winding mechanism contained within the watch-cases.

To the accomplishment of the foregoing and such other objects as may hereinafter appear the invention consists in the construction and the combination of parts hereinafter particularly described, and then sought to be specifically defined by the claims, reference being had to the accompanying drawings, in which are illustrated three forms of watch mechanism to which the invention is shown applied, and in which—

Figure 1 is a plan view of portions of an American watch, with certain parts in section. Fig. 2 is a similar view of a Swiss make of watch with the invention applied thereto. Fig. 3 is a rear view of the watch illustrated in Fig. 2. Fig. 4 is a perspective of the ring and cam adapted to be applied to the watch-
pendant for the purpose of throwing into operation the hand-setting mechanism. Fig. 5 is a plan view of parts of another form of Swiss make of watch, with parts in section, showing the invention applied thereto, the hand-setting mechanism being out of operative connection; and Fig. 6 is another view

of the same form, showing the hand-setting mechanism thrown into operative position.

In the drawings the numeral 1 designates a part of the watchcase, and 2 the pendant, through which passes the stem 3, which is connected at its lower end with a gear-wheel of any of the approved forms for transmitting motion to the parts by rotation of the stem, said stem being provided at its upper end with the head or crown 4. The ring or bow 5 of the watch is secured in any well-known way to the sleeve portion 6 of the pendant, which is illustrated as secured to the upper portion of the pendant 2 by means of a set-screw 7.

The numeral 8 designates a ring formed with a collar 9, which encircles the pendant and which preferably fits into a recess formed in the lower portion of the pendant. The collar 9 inside of the ring or annulus 8 is formed with an inclined plane surface 10, which forms a cam, as illustrated clearly in Figs. 1, 2, 4, 5, and 6, and which inclined plane is preferably formed with a shoulder 11, which will constitute a stop to limit the rotation of the ring 8 in one direction, but which is not absolutely essential to the invention.

Through the lower portion of the pendant 2 passes a vertically moving or sliding pin 12, the lower portion of which lies within the watchcase over a lever which in Fig. 1 is designated by the numeral 13, the upper portion of the pin lying beneath the cam 10 in the ring 8. The lower portion of the pin 12 is preferably formed with a foot 14, but this is not absolutely essential.

The lever 13 is fulcrumed at 15 and its opposite end bears directly upon the yoke 16, which carries, as usual, the wheels or pinions which are alternately brought into engagement with the winding and the hand-setting train as the watch is to be wound or the hands to be set. The yoke 16 is under the influence of the spring 17', which normally holds the yoke in such position that one of its wheels or pinions is normally in engagement with the winding-train.

Under my construction, when the hands are to be set, the ring 8 is partially rotated so as to cause the cam-surface 10 to force

downward the sliding pin 12, whose lower end is thus pressed against the lever 13, so that the lever is made to bear down upon the yoke 16, so as to move its winding-train pinion out of engagement with the winding-train and so as to throw its hand-setting pinion into engagement with the setting-train. The yoke and the lever are held in this position by the cam bearing down upon the sliding pin 12, and the crown 14 is turned so that through its stem 3 the hands can be turned back or forth, as desired. After the hands have been set the ring 8 is turned so as to lift the cam from pressure on the sliding pin 12, whereupon the lever 13 is released from the pressure of the cam, and the spring 17' then restores the yoke 16 to its normal position, and in resuming its normal position it presses up against the lever 13 to lift it and push the sliding-pin 12 upward along the cam-surface as the latter is turned.

By the construction described the cam and the sliding pin and fulcrumed lever are positive in their action and not liable to get disarranged or out of order. The lever 13 receives directly the pressure of the sliding pin, and imparts the pressure thus received directly to the yoke 16, thus greatly simplifying the arrangement of parts, insuring direct and positive action of the parts, and dispensing with the necessity of using additional parts or features of construction, which tend to increase the cost and to shorten the life of the parts. The application of the ring and its cam as specified does not detract at all from the appearance of the pendant and is simple to operate and efficient in action.

In Figs. 2 to 6 of the drawings I have illustrated the same invention applied to two different Swiss makes of watch. The construction and application of the ring and its cam are the same in all forms; but in these Swiss makes the form of the lever located inside the watchcase is different from that illustrated in the form which I have devised for the American make.

In Fig. 2 of the drawings the lower end of the stem 3 is illustrated as provided with the loosely-mounted wheel 17, and below which are the clutch 18 and wheel 19, which are of ordinary and well-known construction and adapted to operate in the usual way in such makes of watches. The forked lever 20 is provided with its upwardly-extending arm 21, against the forward end of which will bear the sliding pin 12, as illustrated in Fig. 2 of the drawings. In this form the ring 8 is turned, as in the form illustrated in Fig. 1, so as to cause its cam to bear on the upper end of the sliding pin 12, in order that its lower end may press against the arm 21, so as to depress the forked lever 20 and thus slide upon the stem 3 the lower portion of the clutch 17, in order to bring the wheel 19 into engagement with the wheel below it for the purpose of setting the hands. On reversing the movement of the ring 8 pressure is relieved from

the pin 12 and arm 21, so that the spring 22 may restore the lever 20 and its clutch 17 and 18 to their normal position in readiness to wind the watch.

In Fig. 5 of the drawings I have shown substantially the same construction of ring 8 and its cam as in Fig. 1, the difference being merely that the collar 9 of the ring extends below the lower face of the ring and lies within the socket 23 of the watch-frame. In this form, as in the form shown in Fig. 2, the lower end of the stem 3 is provided with a loosely-mounted clutch-wheel 17 and a sliding clutch 18 and wheel 20, as illustrated in Fig. 2 of the drawings. In this form, however, the lever 24 has a vertical movement and its arm 25 is made to bear at its upper end against the end surface of the cam 10, as illustrated in Figs. 5 and 6. To throw the hand-setting train into gear under this form, the ring 8 is turned, as in the other forms, so as to cause its cam-surface 10 to bear against the upper end of the arm 25 of the lever 24, so as to depress that lever and cause the wheel 18 to engage with the wheel below, as illustrated in Fig. 6, thereby bringing the train-setting mechanism into operative connection, so that by turning the stem 3 the hands may be set backward or forward, as desired. On reversing the direction of movement of the ring 8 the cam-surface is moved from its pressure on the arm 25, and the spring 26 pushes the lever 25 and its arm upward as the cam-surface recedes over the arm 25.

I have not deemed it necessary to describe in detail the train of gearing inside of the watchcase in any of the forms illustrated, as the same is of ordinary construction and operated in the ordinary way. I have confined myself to illustrating three different forms to which my invention is applicable. It is obvious, however, that my invention is likewise applicable to other forms of watches upon the market.

I have illustrated and described with particularity the preferred details of construction and arrangement of the parts of my invention; but it is obvious that changes can be made therein without departing from the essential features of the invention.

Having described my invention and set forth its merits, what I claim is—

1. In a stem winding and setting watch, the combination with the winding and setting stem, of a rotatable ring or annulus formed with a cam rotatable therewith, a lever for shifting the parts necessary to throw the setting mechanism into operative relation and the winding mechanism out of operative relation, and a pin or arm projecting through the watchcase, one end of said pin or arm lying in the path of rotation of said cam and the other operating on said lever, substantially as and for the purposes described.

2. In a stem winding and setting watch, the combination with the winding and setting stem, of a rotatable annulus or ring formed

on its inside with a cam rotatable therewith,
a lever for shifting the parts necessary to
throw the setting mechanism into operative
relation and the winding mechanism out of
5 operative relation, and a movable pin or arm
having its lower portion in connection with
said lever and its upper end in proximity to
the cam of the rotatable ring or annulus so
as to be depressed by the movement of said
10 cam, substantially as and for the purposes de-
scribed.

3. In a stem winding and setting watch, the
combination with the winding and setting
stem, of a rotatable annulus or ring provided
15 with a cam rotatable therewith, a yoke car-
rying wheels adapted to be thrown into en-
gagement respectively with the winding and
the setting train, a lever fulcrumed inside of
the watchcase and having one end bearing
20 directly upon said yoke, and a movable or
sliding pin having its lower end arranged to

bear upon said lever and its upper end lying
in the path of rotation of said cam, substan-
tially as and for the purposes described.

4. In a stem winding and setting watch, the 25
combination with the winding and setting
stem, and the watch-pendant, of a rotatable
ring encircling the pendant and provided with
a cam rotatable with the ring, and an up-
wardly-extending pin or arm having its up- 30
per end lying in the path of said cam to be
moved as the cam rotates and its lower end
arranged to operate a part of the winding and
hand-setting mechanism, substantially as and
for the purposes described. 35

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

SAMUEL LESNICK.

Witnesses:

GEO. H. BENJAMIN,
J. E. PEARSON.