

F. R. ALFORD.

WATCH.

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945,667.

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Fig. 1.

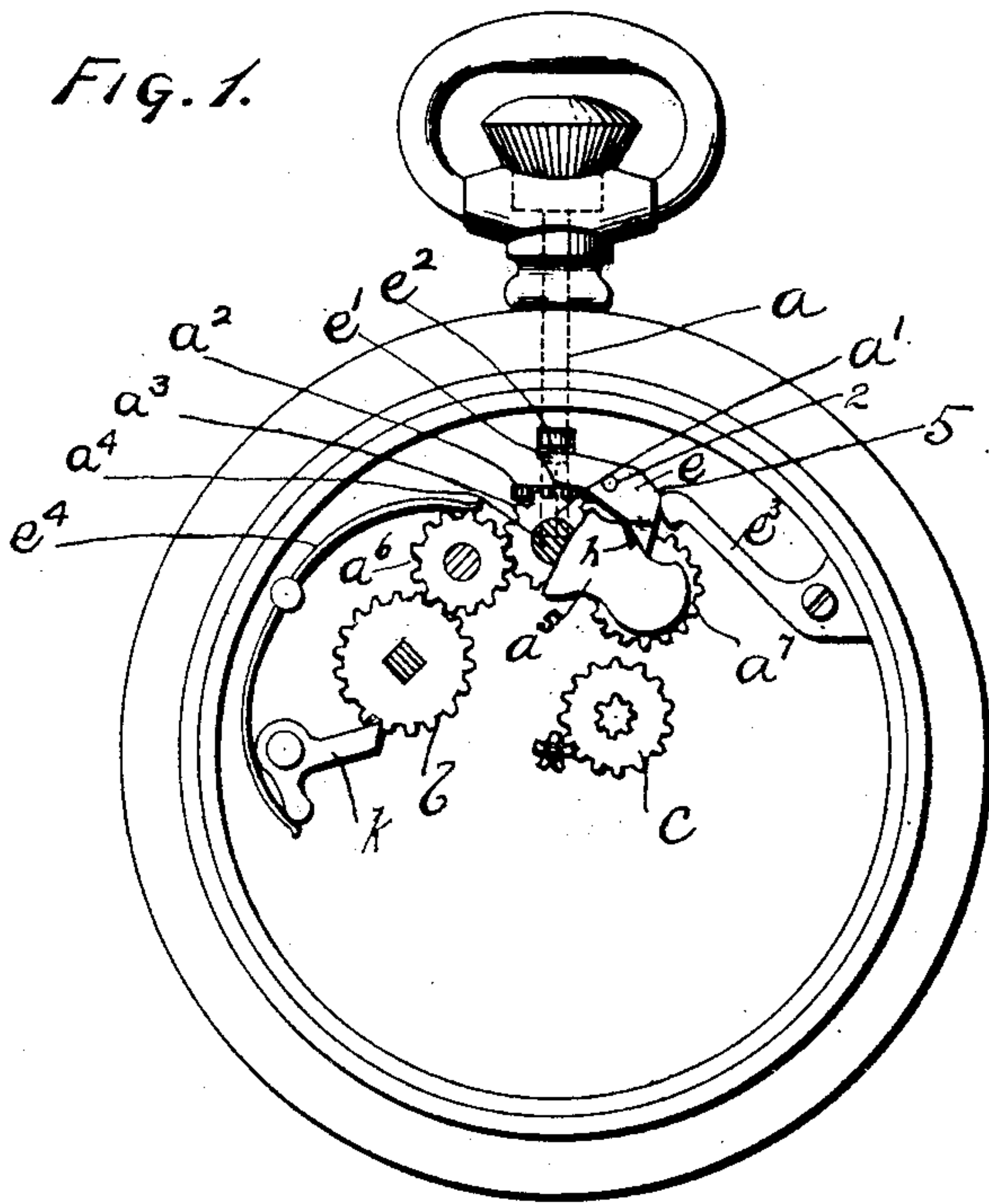


Fig. 2.

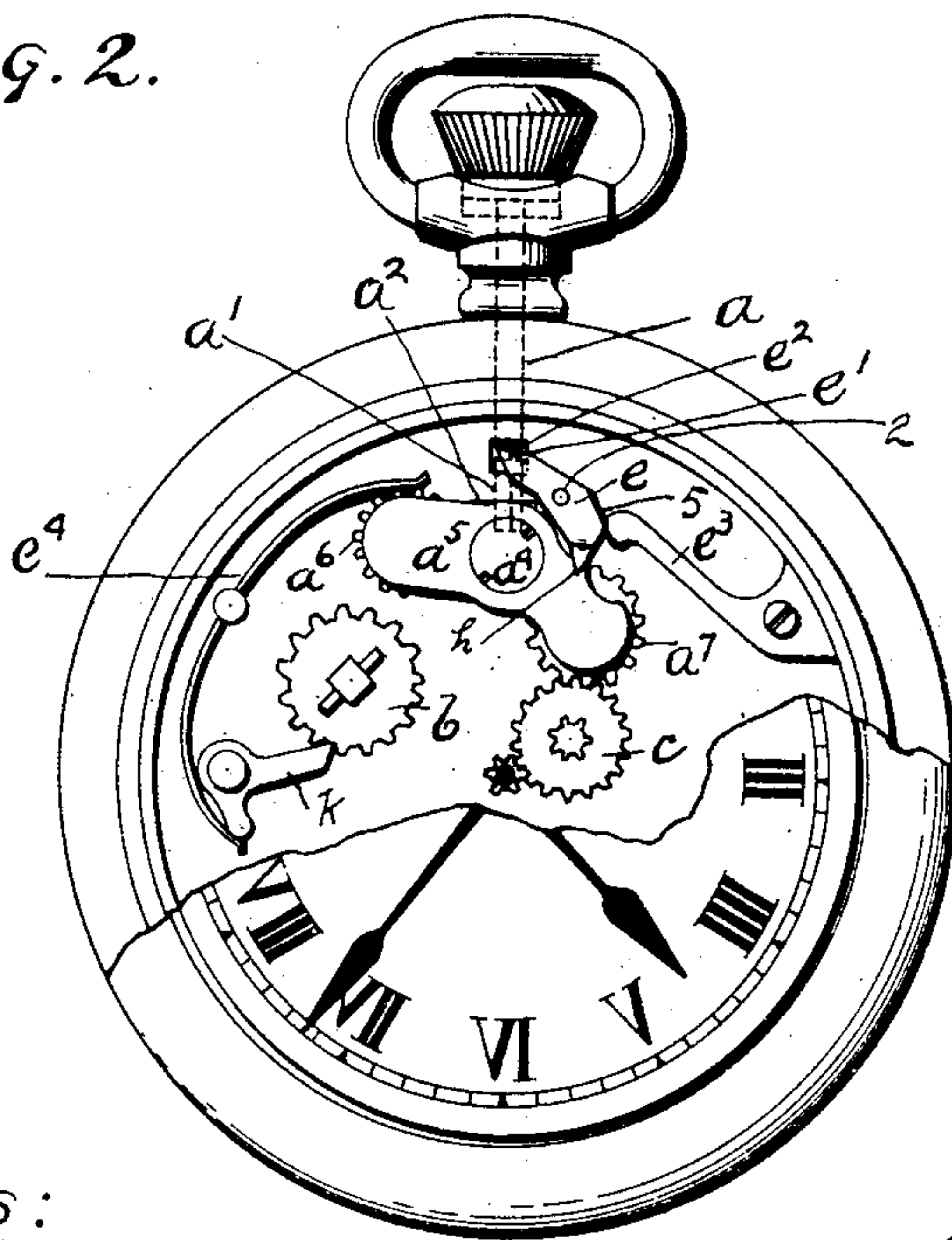
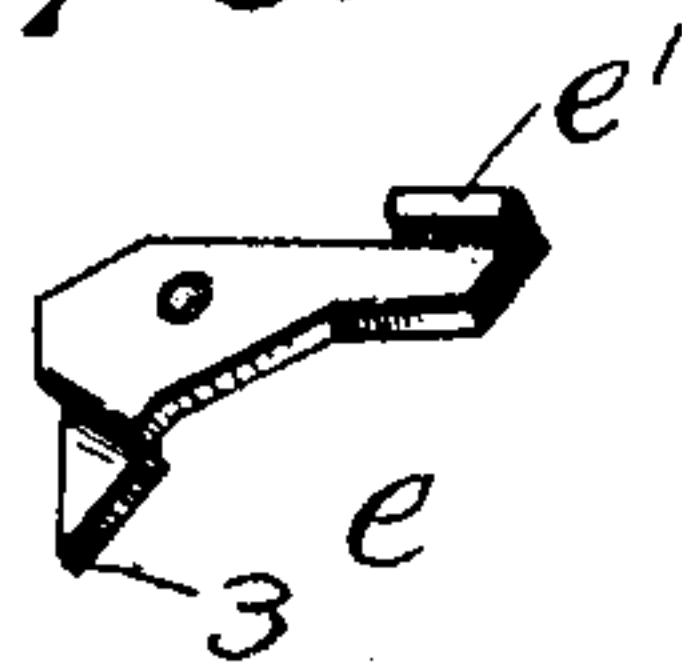


Fig. 3.



WITNESSES:

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WATCH.

945,667.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, FRANK R. ALFORD, citizen of the United States of America, residing at Winsted, in the county of Litchfield and State of Connecticut, have invented certain new and useful Improvements in Watches, of which the following is a specification.

The object of the invention is to provide a stem winding and setting device for watches which shall be thoroughly effective for its designed purpose and at the same time so inexpensive to manufacture and assemble as to allow of its use in cheap watches such as are sold for one and two dollars.

In the drawings: Figure 1 is a view of a watch embodying my invention, some of the parts being moved or broken away to show the construction and arrangement. Fig. 2 is a view similar to Fig. 1, showing the parts in setting position. Fig. 3 is a detail perspective view of the setting lever.

As will be seen from the drawings a is the crown stem squared at its lower end a' to receive the pinion a^2 , which is in mesh with the intermediate wind and set wheel a^3 mounted on a suitable pivot a^4 , on which there is also mounted the pivoted yoke a^5 carrying at one end the intermediate wind wheel a^6 and at the other end the intermediate set wheel a^7 , both of which are in mesh with the wheel a^3 . The wind ratchet wheel b and the minute wheel c are located in operative relation to a^6 and a^7 respectively so that either pair $a^6 b$ or $a^7 c$ can be brought into mesh by swinging the yoke.

The following means I have provided for moving a yoke. A set lever (e) is substantially triangular in shape and is pivoted to the frame by the pin 2 located near the central point of the triangle. Said lever is provided at one end with an inwardly extending lug (e') adapted to lie in the annular groove (e^2) in the crown stem (a) as clearly shown. The other end of the lever e is off-set in a reverse direction to said lug, said off-set being pointed as at 3 which is adapted to contact with one end of the yoke a^5 and a spring e^3

engages the set lever at a flattened bearing portion thereof 5 to hold the latter in said engagement. Another spring e^4 engages the opposite end of the yoke to hold the latter in its normal position. A rocking pawl h is normally pressed into engagement with the ratchet b by action of an end of said spring e^4 .

Normally the yoke is tilted so that the intermediate wind wheel a^6 is in mesh with the wind wheel b , the parts being in the position shown in Fig. 1. To set the hands an outward pull is exerted upon the crown stem, moving the set lever e to tilt the yoke a^5 and bring the intermediate set wheel a^7 into mesh with the minute wheel c , as shown in Fig. 2. In this latter position the contacting end of the set lever e is adapted to temporarily engage the notch h in the top surface of the yoke a^5 , it being understood that the spring e^3 insures said contact. A revolution of the crown stem a operates through said meshing wheels to revolve the watch hands as desired. When the setting operation is completed the crown stem is pressed in and the winding mechanism brought into mesh. It is understood that during the in and out movements of the crown stem the pinion a^2 is continually in mesh with the intermediate wind and set wheel a^3 , the squared end of the stem sliding through it.

I claim as my invention:

In a stem winding and setting watch in which the winding mechanism is normally in operative position, the combination with the usual stem winding and setting trains which include an intermediate wheel, a pivoted yoke, a single pivot for said yoke and intermediate wheel, winding and set wheels mounted on the ends of said yoke, a wind ratchet and minute wheel, a pinion in mesh with said intermediate wheel, a crown stem on which said pinion is mounted, said stem being movable lengthwise through said pinion, a triangular pivoted lever having one pointed off-set corner at one apex thereof and being in engagement with said yoke, said lever having a plane bearing surface

adjacent said sharpened apex and provided
with a central mounting, said triangular le-
ver having its opposite end reversely off-set
forming a marginal flange and connected
5 with said crown stem, said yoke provided
with a notch for receiving said engaging
end of the pivoted lever, and a spring ex-
erting pressure upon said lever and adapted

to bear upon the plane bearing surface
thereof.

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

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FRANK R. ALFORD.

Witnesses:

HUBERT P. WETMORE,
SAMUEL A. WETMORE.