

No. 764,885.

PATENTED JULY 12, 1904.

F. R. CUNNINGHAM.

CLICK FOR WATCHES OR OTHER MECHANISMS.

APPLICATION FILED FEB. 3, 1904.

NO MODEL.

FIG. 1.

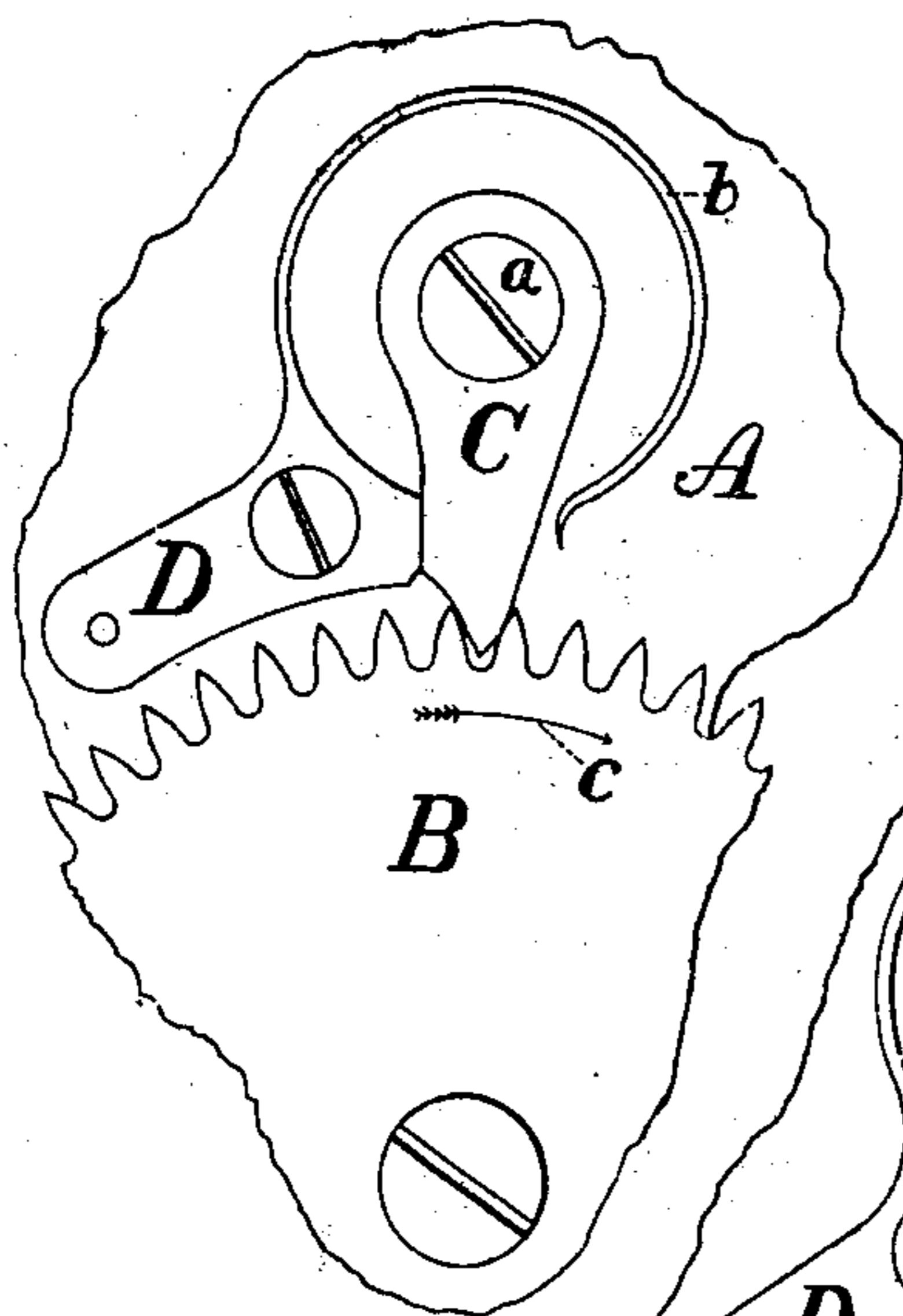


FIG. 2.

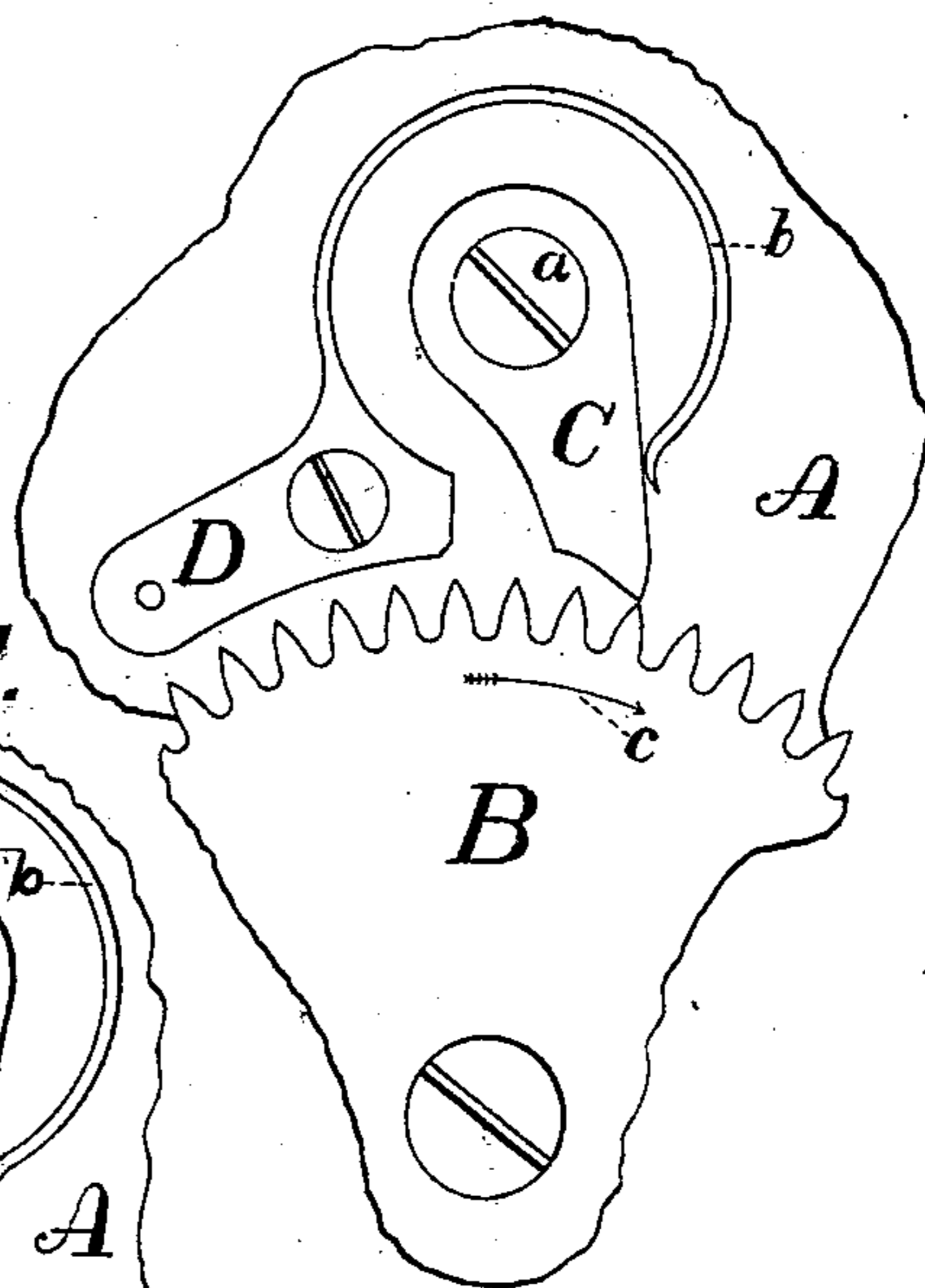
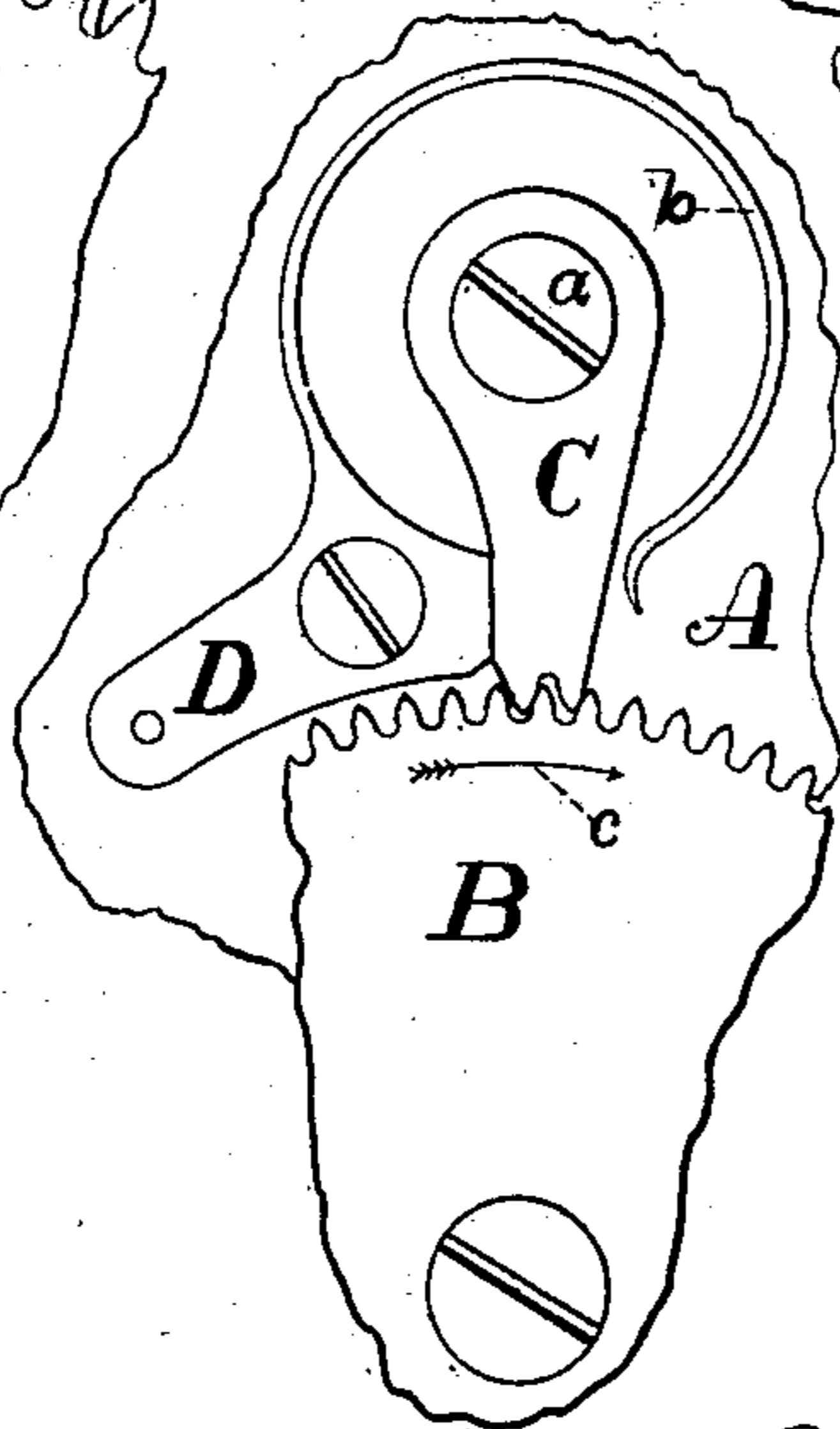


FIG. 3.



Witnesses

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UNITED STATES PATENT OFFICE.

FRANK R. CUNNINGHAM, OF MEDFORD, MASSACHUSETTS, ASSIGNOR TO
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CLICK FOR WATCHES OR OTHER MECHANISMS.

SPECIFICATION forming part of Letters Patent No. 764,885, dated July 12, 1904.

Application filed February 3, 1904. Serial No. 191,889. (No model.)

To all whom it may concern:

Be it known that I, FRANK R. CUNNINGHAM, a citizen of the United States, residing at Medford, in the county of Middlesex and State of Massachusetts, have invented an Improvement in Clicks for Watches or other Mechanism Where Recoil is Desirable, of which the following is a specification.

My invention relates to clicks for watches and other mechanism where a slight recoil of the spring or other motive power is desired at the termination of winding.

In watches where the winding-wheel is provided with an ordinary retaining pawl or click the point of which engages the wheel tangentially or considerably off the line of centers it frequently happens that the click enters a notch in the wheel at the extreme limit of the winding of the spring, in which case there is no recoil. Consequently undue strain is put upon the train at that time, which is productive of an abnormally large vibration of the balance, which might result in irregularity of rate or even breakage of some of the delicate parts of the mechanism.

My invention has for its object to overcome these difficulties by providing means whereby a sufficient amount of recoil of the spring or other motor is insured at the termination of winding. I attain this object by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is an enlarged plan of a portion of the winding-wheel of a watch, its click and parts immediately adjacent thereto embodying my invention. Fig. 2 is a similar plan showing the position of the parts at the time when the click is about to pass from one tooth to the next. Fig. 3 is a modification showing the click with a plurality of points.

In the said drawings, A represents a portion of a watch-plate, and B a portion of the winding or ratchet wheel connected with the motive power.

C is the retaining-click, which is pivoted to the plate A at *a*, the point of said click when at rest standing normally at or near the line

of centers of the said wheel and the click-pivot.

D is a block which is secured to or may form a part of the plate A, said block forming a stop for arresting the backward movement of said click with its point at or near the line of centers.

b is a spring the free end of which is adapted to act on the click as the latter is moved forward toward the position shown in Fig. 2 in the operation of winding, the spring then serving to maintain the point of the click in contact with the teeth of the wheel as they pass thereunder.

At the termination of the winding the click C is carried back by the wheel B from about the position shown in Fig. 2 into contact with the stop D, as shown in Fig. 1, thus insuring the necessary recoil of the wheel B, and thereby obviating the injurious effects incident to the use of the ordinary click.

In Fig. 3 is represented a modification of my invention in which the click is provided with a plurality of points and which I prefer to employ where the wheel B has very small teeth or where greater strength is required.

Although my invention is particularly adapted for watches and clocks, it is obvious that it may be employed to advantage in any mechanism where a recoil of a ratchet-wheel is desired.

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

1. The combination with a toothed wheel, of a retaining-click normally engaging said wheel at or near the line of centers of said wheel and the click-pivot, and a stop separate from and acting upon said click limiting its movement in a backward direction.

2. The combination with a toothed wheel, of a retaining-click having a plurality of points, said click normally engaging said wheel at or near the line of centers, and a stop separate from and acting upon said click limiting its movement in a backward direction.

3. The combination with a toothed wheel,

of a retaining-click normally engaging said wheel at or near the line of centers, a stop separate from and acting upon said click limiting its movement in a backward direction,
5 and a spring for actuating said click.

4. The combination with a recoil winding-wheel, of a retaining click or pawl pivoted to a fixed part and normally engaging the wheel at or near the line of centers, a stop on
10 said fixed part in the rearward path of the

click or pawl and a spring extending from said stop and engaging the click or pawl to hold it against the wheel.

Witness my hand this 29th day of January,
A. D. 1904.

FRANK R. CUNNINGHAM.

In presence of—

P. E. TESCHEMACHER,
A. B. CÔTÉ.