

A. ANDERSON.
WINDING INDICATOR.
APPLICATION FILED DEC. 12, 1902.

NO MODEL.

Fig: 1.

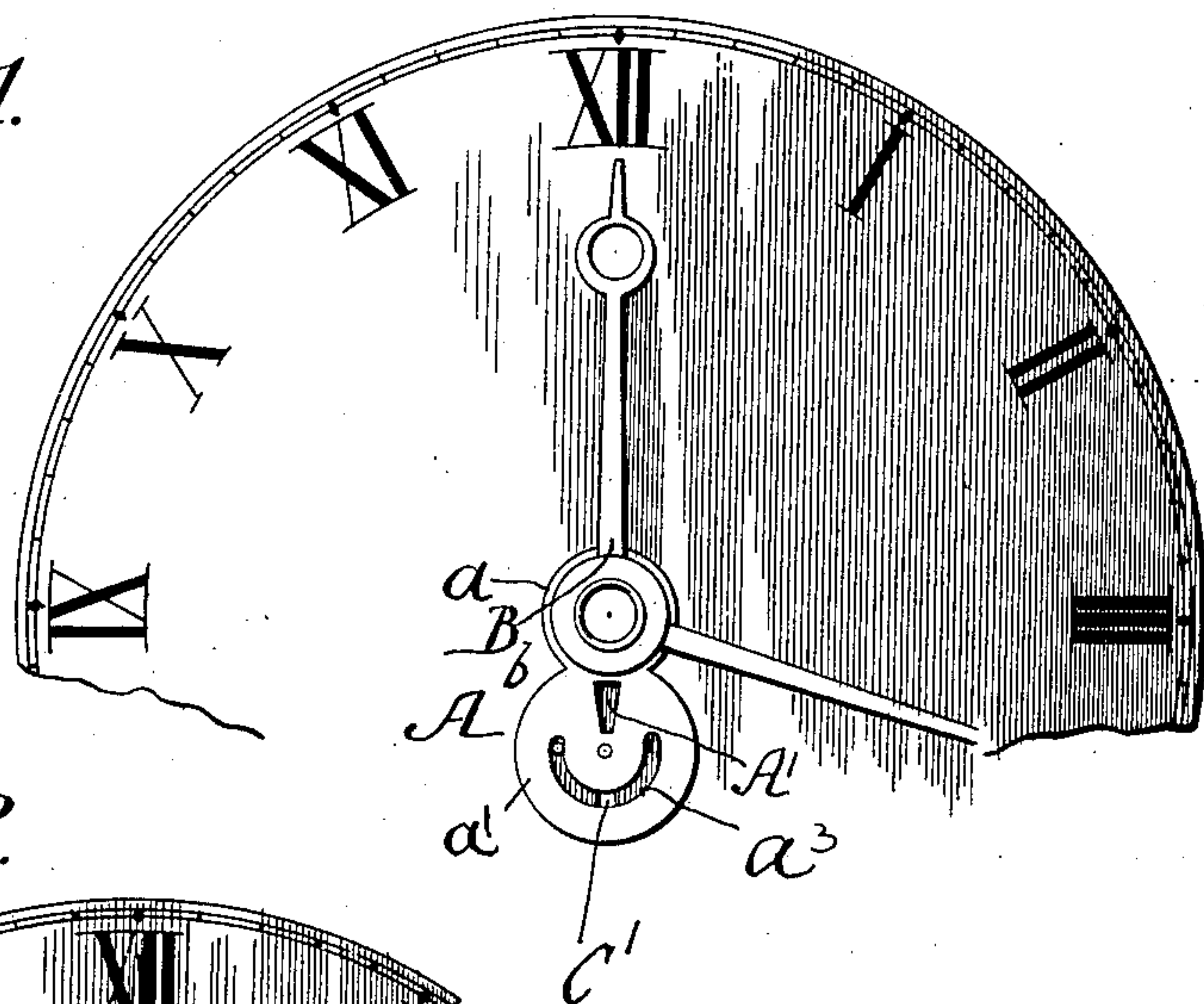


Fig: 2.

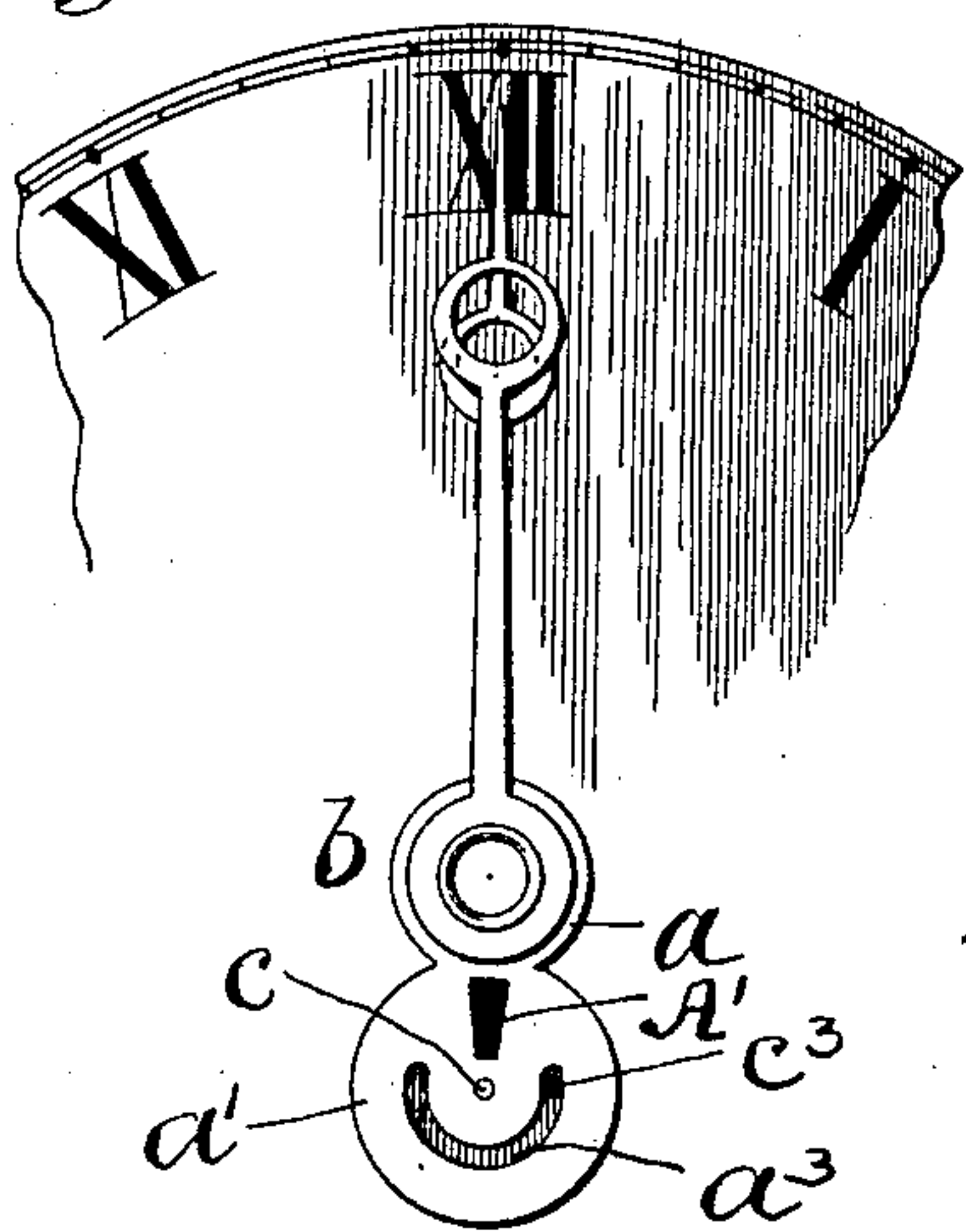


Fig: 3.

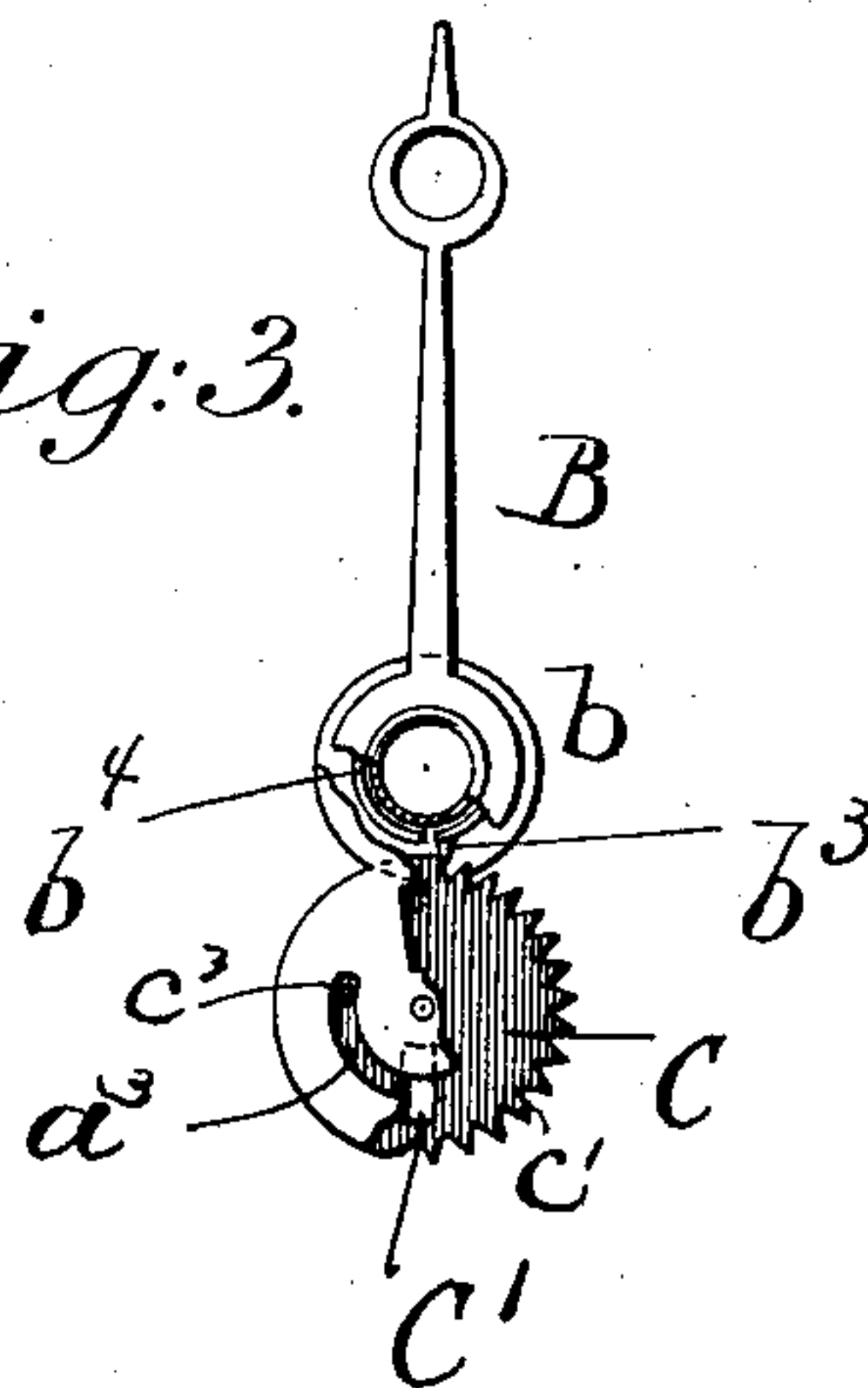
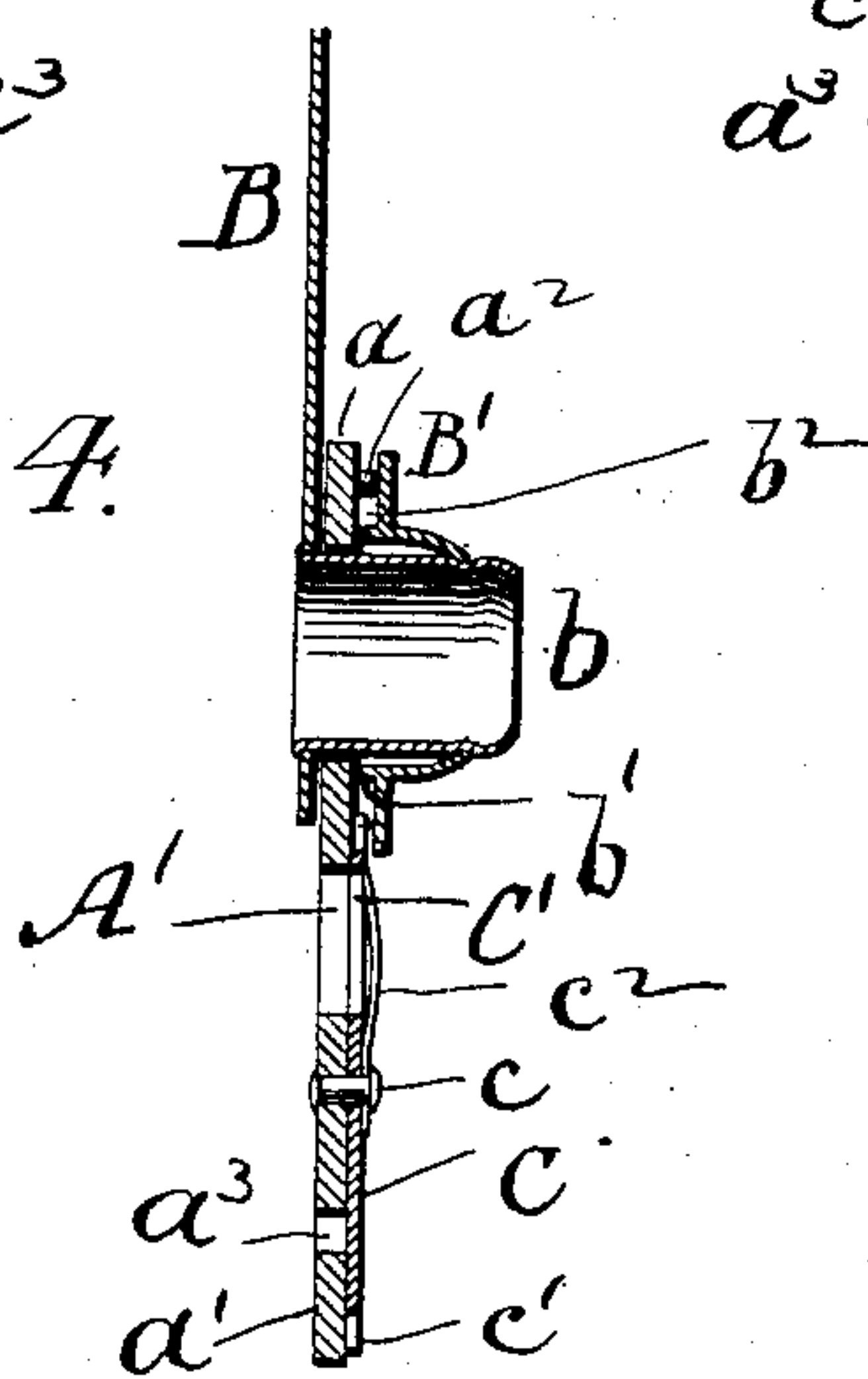


Fig: 4.



Witnesses
B Patterson.
D N Hagen

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By his Attorneys
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UNITED STATES PATENT OFFICE.

ANDREW ANDERSON, OF EUCLID, MINNESOTA.

WINDING-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 738,971, dated September 15, 1903.

Application filed December 12, 1902. Serial No. 134,918. (No model.)

To all whom it may concern:

Be it known that I, ANDREW ANDERSON, a citizen of the United States, and a resident of Euclid, county of Polk, and State of Minnesota, have invented certain new and useful Improvements in a Rewinding-Indicator, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

The subject of the present invention is a rewinding-indicator, more particularly designed for service in connection with clocks having an actuation capacity extending over a period represented by a number of days, the most familiar capacity in this respect being eight days.

Among the more prominent objects of the invention is the production of a device of the character stated which will not only be simple in construction, but which will accurately indicate when the period of rewinding has been reached. These and other purposes are attained in the novel device hereinafter described, which presents the invention in the form of a simple attachment readily applicable to existing construction of clocks.

In the accompanying drawings, forming part of this specification, Figure 1 is a face view of a portion of a clock-dial and its central arbor, my novel indicating attachment being represented as being applied thereto, with its parts in the position they occupy immediately subsequent to the rewinding of the clock. Fig. 2 is a detail view of the indicator, illustrating the position of certain parts thereof at the period when it indicates the necessity for rewinding. Fig. 3 is another detail view illustrating the character of the step-by-step spur-gear employed in the indicator. Fig. 4 is a vertical section, on an enlarged scale, taken in the plane indicated by the dotted line 4-4, Fig. 1.

As disclosed herein I have adapted the novel indicator for service with a clock having an actuation capacity of eight days without requiring rewinding. The main portion of the attachment is in the form of a plate A, having a configuration of an upper circular section a and lower larger circular section a' intersecting the same.

The upper section a has a central aperture sufficient for the snug bearing of the sleeve b of the hour-hand B of the clock. The section a and sleeve are retained in relative engagement by a small flanged collet B', which embraces and is secured to the sleeve at the rear so as to revolve therewith, said collet having a small forward cylindrical extension b' , which serves to establish a narrow annular space b^2 between the collet-flange and the rear of the section a , said space being maintained to a considerable extent by a circular series of equidistantly-located lugs a^2 , projecting from the rear of the section a . On the extension b is a single spur-tooth b^3 . A convenient and efficient manner of securing the collet in position is to form its body of a series of spring-tongues b^4 and spring the downwardly-turned rear ends of the same into an annular recess therefor externally in the rear portion of the sleeve.

On a fixed pivot c , centrally projecting at the rear of the section a' , is a disk C, having a portion of its periphery provided with a series of spur-teeth c' , the number illustrated being 16. The disk C is adapted to be retained with slight friction relative to the section a' to any position to which said disk may be turned by means of a bent spring-tongue c^2 , secured rigidly on the pivot c and bearing with a brake effect on the rear face of the disk.

A small lug c^3 projects forwardly into an extended segmental slot a^3 in the lower portion of the section a' and concentric with the pivot c thereon. The lug c^3 coincides into one end of the series of spur-teeth c' .

In the section a' , centrally over the pivot c , is a small sector-shaped aperture A'. The disk C has a similar-shaped aperture C', which is radially coincident with the end of the spur-teeth c' opposite to that where the pin c^3 is located.

The operation of the device will be readily understood. The hour-hand, with its sleeve, is removed and the plate A and collet B' applied thereon, as described, the plate occupying a pendent position and remaining fixed in such pendent position relatively to the revolving hour-hand. Before or subsequent to the winding of the clock the small lug c^3 is moved to the left-hand end of the slot a^3 , as

indicated in Fig. 1, which will bring the series of spur-teeth c' , in such relation to the single tooth b^3 , on the sleeve-collet that as the hour-hand makes each normal and complete revolution it will turn the disk C one tooth. As each revolution of the hour-hand represents a period of twelve hours, and as two such revolutions with the advancement of two teeth c' represents one day, the series of sixteen teeth c' represents eight days, the running capacity of the clock. When the last of the series of teeth c' has been acted upon by the tooth b^3 , which will be when the aperture C' comes into registration with the aperture A' in the section a' , an indication is given that the clock requires rewinding. This signal or indication will be emphasized by fixedly locating behind the disk C and on a line with the aperture A' some colored body that will be disclosed through the same when the aperture C' comes into registration. I have provided for this by locating the spring-tongue c^2 so that it extends in a plane back of the aperture A' and prefer to face the same with some sinking coloring matter or enamel which will be visually displayed through both apertures when in registration.

From the foregoing it will be appreciated that the novel indicator is not only simple but highly serviceable and comparatively inexpensive.

I do not desire to be understood as restricting or limiting myself to the particular construction and arrangement of parts shown and described, but reserve the right to all such modifications as are fairly within the scope of my invention.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination with the sleeve b , of the hour-hand B, of the plate A, having intersecting sections a and a' , the collet B', holding said section a in position on said sleeve, and means whereby in connection with said plate-sections a signal to indicate time for rewinding the clock, whereof said hour-hand is a part, is displayed.

2. The combination with the sleeve b of the hour-hand B of a clock, of the plate A, having intersecting sections a and a' , the collet B', upon said sleeve and itself holding said plate-section a in position on said sleeve, the

extension b' , on said collet, and the lugs a^2 , projecting from said section a , the spring-tongues b^4 , holding said collet on said sleeve, and means whereby in connection with said plate-sections a signal is displayed at the time said clock should be rewound.

3. The combination with the sleeve b , of the hour-hand B of a clock, the plate A, having intersecting sections a and a' , and the collet B', having spring-tongues b^4 , holding it on said sleeve and itself holding said plate-section a , in position on said sleeve, of the disk C, having a plurality of teeth c' , upon its periphery and mounted on the pivot c , on the said plate-section a' , means for actuating the said disk and means whereby the mechanism is enabled to display a signal when it is time to rewind the said clock.

4. The combination with the sleeve b , of the hour-hand of a clock, the plate A having intersecting sections a and a' , and the collet B', having spring-tongues b^4 , whereby it is held on said sleeve, and itself holds said plate-section a on said sleeve, of the disk C, having a plurality of teeth on its periphery, and mounted on the pivot c on the plate-section a' , the brake-spring c^2 , bearing on said disk, means whereby said mechanism is actuated, and means whereby it is enabled to display a signal when it is time to rewind said clock.

5. The combination with the sleeve b , of the hour-hand B, of a clock, a plate A, having intersecting sections a and a' , and the said plate-section a' , having a segmental slot a^3 , the collet B', having spring-tongues b^4 , holding it on the said sleeve and itself holding the said plate-section a on said sleeve, of the disk C, having a plurality of teeth on its periphery and mounted on a pivot c , on the said plate-section a' , the brake-spring c^2 , engaging said disk, the lug c^3 , projecting through said segmental slot and affording facility for adjusting said disk, means for actuating said mechanism, and means together with which said mechanism is enabled to display a signal when it is time to rewind said clock.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 4th day of October, 1902.

ANDREW ANDERSON.

Witnesses:

HARRY D. WHITEFIELD,
SAMUEL CURRIE.