

G. NUTTING & J. J. SMITH.

WATCH MOVEMENT.

APPLICATION FILED FEB. 20, 1909.

917,788.

Patented Apr. 13, 1909.

2 SHEETS—SHEET 1.

FIG. 1.

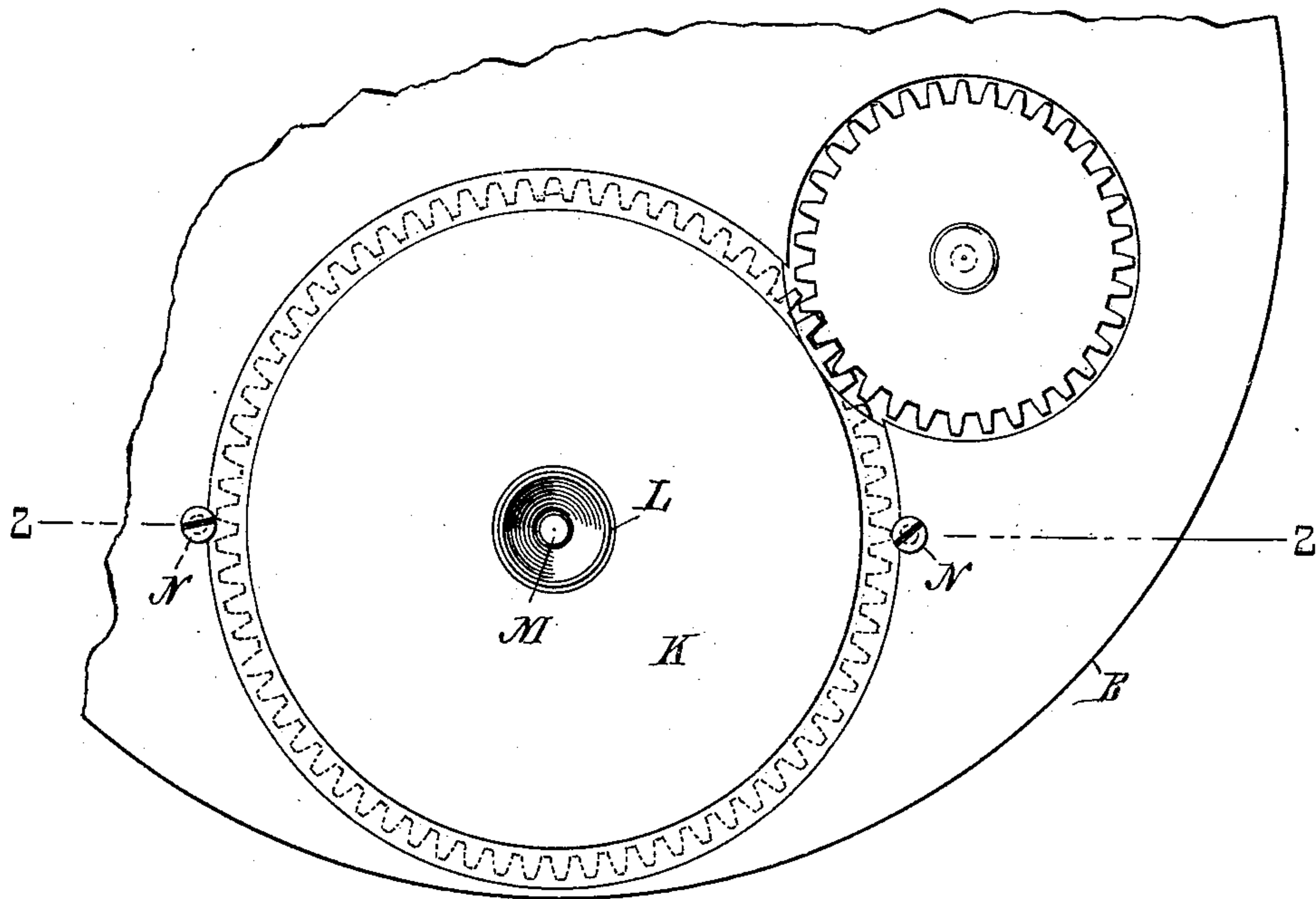
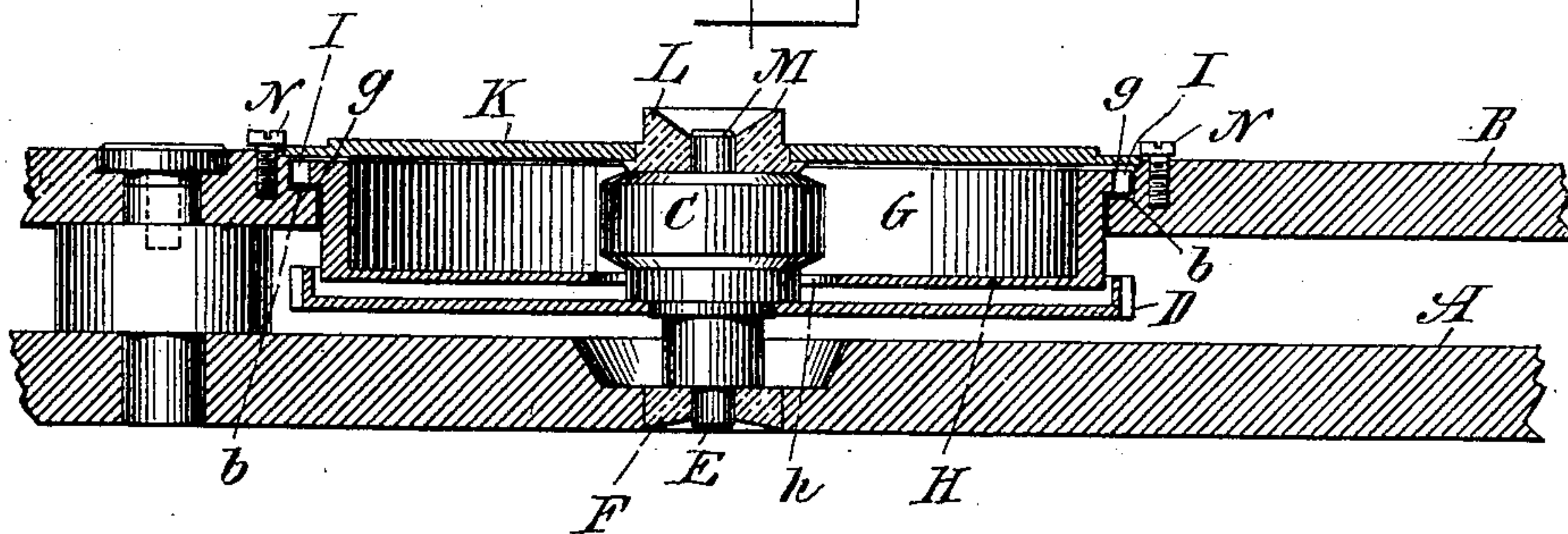


FIG. 2.



WITNESSES:

M. Van Nortwick  
Parker Cook

INVENTORS:

Granville Nutting  
Justin J. Smith  
BY George Cook  
ATTORNEY

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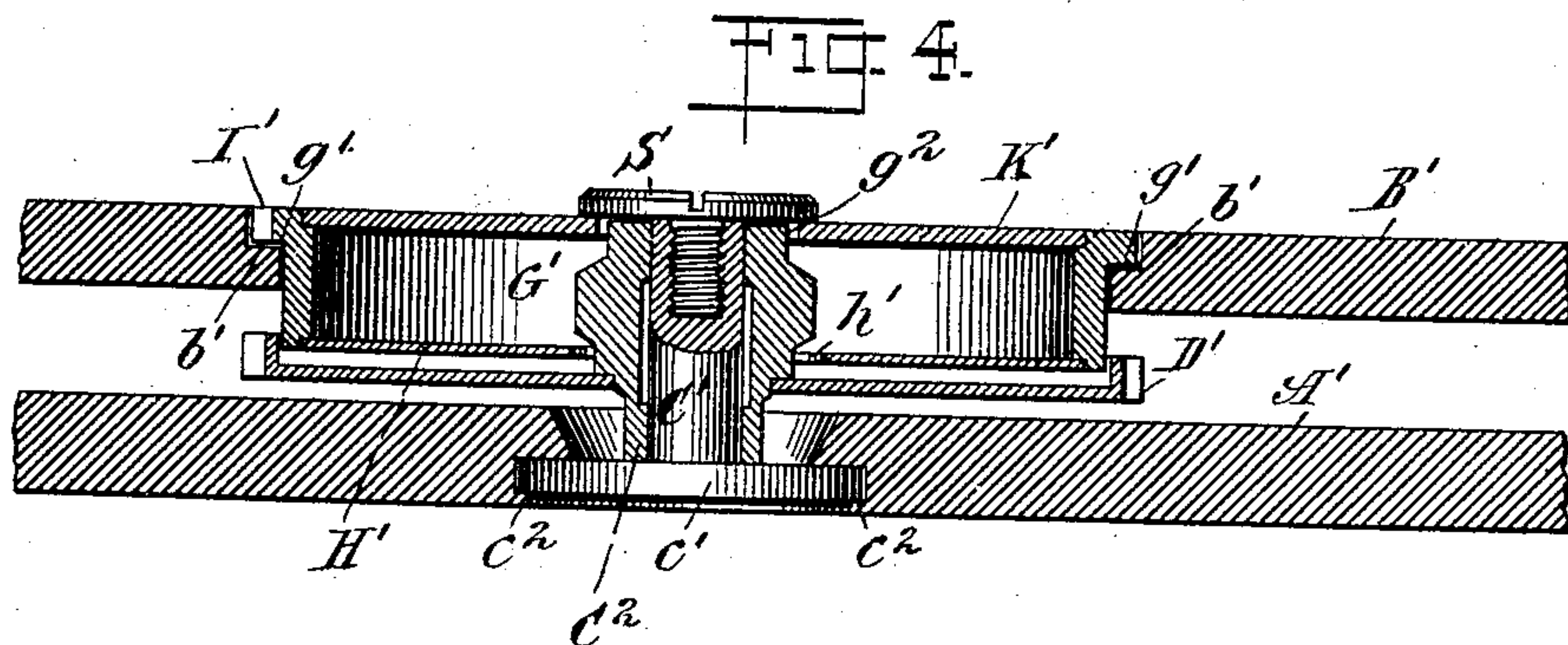
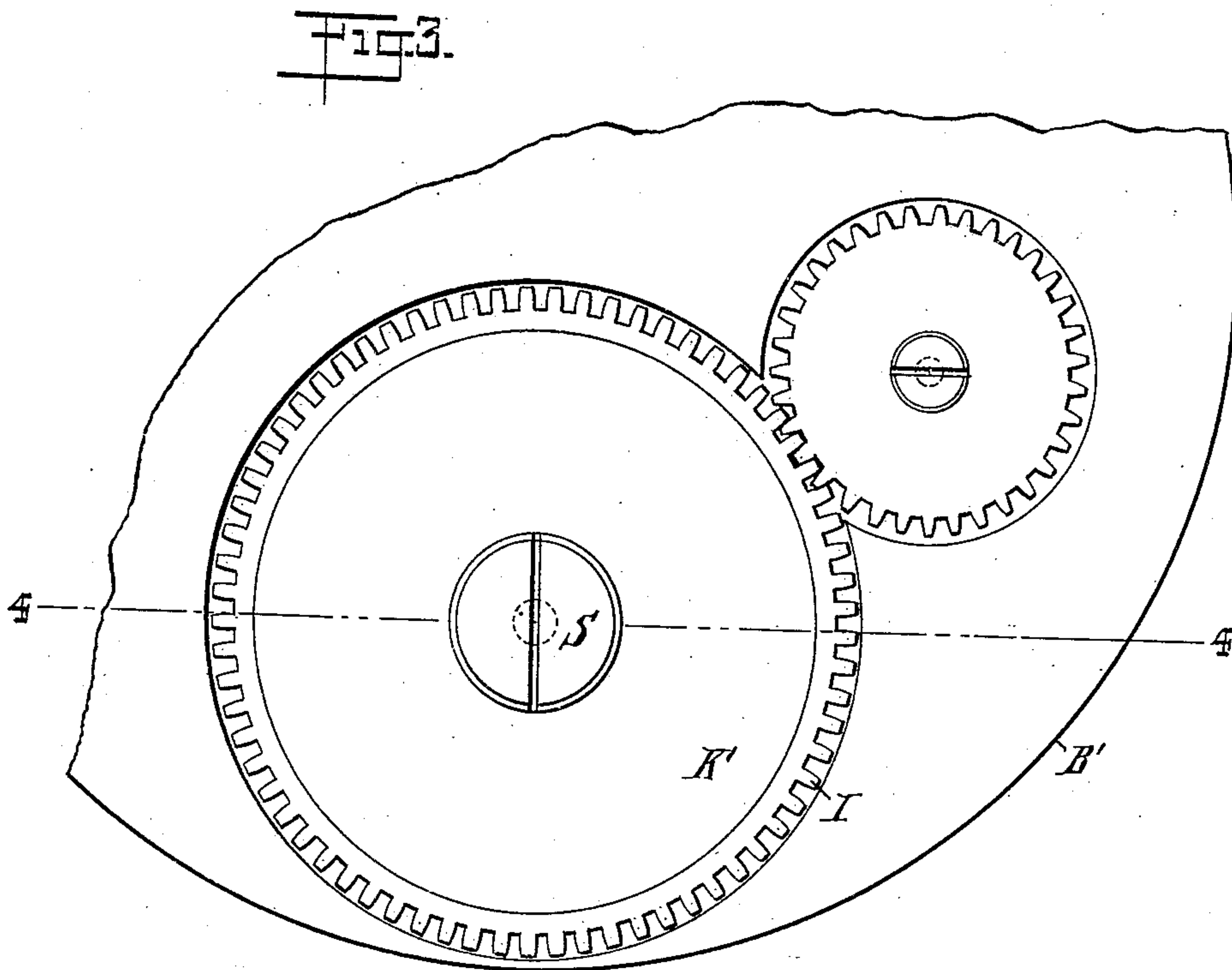
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ATTORNEY.



# UNITED STATES PATENT OFFICE.

GRANVILLE NUTTING AND JUSTIN J. SMITH, OF JERSEY CITY, NEW JERSEY, ASSIGNORS  
TO NEW YORK STANDARD WATCH COMPANY, OF JERSEY CITY, NEW JERSEY, A COR-  
PORATION OF NEW JERSEY.

## WATCH-MOVEMENT.

No. 917,788.

Specification of Letters Patent.

Patented April 13, 1909.

Application filed February 20, 1909. Serial No. 479,180.

*To all whom it may concern:*

Be it known that we, GRANVILLE NUTTING and JUSTIN J. SMITH, citizens of the United States, and residents of Jersey City, county of Hudson and State of New Jersey, have made and invented certain new and useful Improvements in Watch-Movements, of which the following is a specification.

Our invention relates to an improvement in watch movements, and more particularly to watch barrels, the object of the same being to so construct and assemble the parts that the barrel, instead of having its bearing on the arbor, as is now usually the case, it may have a larger and more extended bearing on its outer side or surface, and by avoiding the tilting or displacement thereof, greatly improve the time keeping qualities of the movement.

A further object of the invention is to so construct and assemble the parts that easy and ready access may be had to the spring within the barrel without the necessity of taking down the movement; further, to entirely separate the main spring and the first wheel, so that should the former be unevenly wound or unwound, it will bear against the barrel head instead of against the first wheel, all friction between these two parts being avoided, and thereby largely adding to the time keeping qualities of the watch by giving the spring a more uniform power.

A further object of the invention is to so construct the several parts of the barrel that they may be easily and readily assembled, and with the above and other ends in view, consists in certain novel features of construction and combinations of parts, as will be hereinafter fully described and pointed out in the claims.

In the accompanying drawing, Figure 1 is a plan view of a part of a watch movement constructed in accordance with our invention. Fig. 2 is a sectional view thereof. Fig. 3 is a plan view of a modification, and Fig. 4 a sectional view thereof.

Referring to the drawings, A represents the dial plate of a watch movement, and B the top plate or barrel bridge. C is the arbor to which is tightly secured the first wheel D, said arbor being formed or provided at its lower end with the pivot E fitting in the jewel or bearing F secured tightly in the dial plate A. The top plate B is

formed with an opening in which is fitted the barrel G, this barrel at its lower end being formed with the integral head H provided with the central opening I through which extends said arbor C, the opening being of sufficient size to permit of the barrel being removed from its position without disturbing said arbor and without interference therewith. At its upper end the barrel G is provided with the shoulder G and with the integral teeth I, said teeth and shoulder resting upon a shoulder b formed in the top plate B by recessing the same. By thus forming the shoulder g on the upper end of the barrel and recessing the top plate B as described, a bearing is formed for said barrel, an additional bearing being provided therefor by contacting the outer side or surface of the barrel with the vertical wall of the opening in said plate B, these two extended bearings obviating all danger of the barrel tilting and insuring at all times its proper position.

Over the top of the barrel fits the cap plate K, centrally provided with the jewel or bearing L, in which is contained the pivot M formed on the upper end of the arbor C, the plate K being held in position by the screws N tapped into the top plate B, said jewel or bearing L being tightly secured in said cap plate K.

It will be understood, of course, without further description or illustration that both the jewels F and L may be omitted, the lower pivot E having its bearing directly in the dial plate A, and the upper pivot M having its bearing directly in the cap plate K.

It will be understood from the foregoing that we have provided an enlarged and more extended bearing for the barrel than has heretofore usually been the case, with the result of materially improving the time keeping qualities of the movement; furthermore, by removing the two screws N, the barrel with its contained spring may be at once removed without the necessity of taking down the other portions of the movement, and again, the head H effectually prevents any contact of the spring with the wheel D.

Several slight changes might be made in both the construction and arrangement of the several parts above described, without in any way departing from the spirit of our



invention, as for instance, instead of constructing the arbor of one piece, it may be constructed of two pieces, that is, as illustrated in Fig. 4, it may comprise the stud 5 C' provided with a head  $c'$  tightly held in a recess in the dial plate A' by knurling over the metal of the latter onto the head  $c'$ , as illustrated at  $c^2$ . Around the stud C' is fitted the hub C<sup>2</sup>, the lower end resting 10 on the head  $c'$ , and to which hub is secured the first wheel D'. Again, instead of forming the barrel with an integral head, as before described, the head H' may be snapped into a recess formed in the lower end of the 15 barrel G'. As in the former case, this barrel G' is provided with the shoulder  $g'$  and integral teeth I' to rest upon the shoulder  $b'$  formed by recessing the top plate B', the outer side or surface of the barrel, as in the 20 former instance, contacting with and bearing against the vertical wall of the opening formed in said plate B'. In this instance, the cap plate K' will be set within the upper end of the barrel G' and provided with a 25 central opening  $g^2$  for the reception of the upper end of the hub C<sup>2</sup>, a retaining screw S being threaded into the upper end of the stud C' and bearing on the cap plate K' for retaining the barrel with its contained 30 spring in its proper position.

It will be seen from the foregoing that in this instance, as well as in the former instance, by removing the retaining screw S, the barrel G', with its contained spring, may 35 be easily and readily removed, the opening  $h'$  in the barrel head permitting of the barrel being removed without in any way interfering with the hub C<sup>2</sup>.

In both of the above instances, it will be 40 seen that the barrel with its contained spring (this spring having been omitted from the drawings for the sake of clearness), may be easily and readily removed or inserted in place, the removal of one or two screws only 45 being necessary for the operation. Furthermore, the barrel, instead of having its bearing on the arbor, as is now usually the case, has a much larger and more extended bearing on its outer side or surface, greatly improving the time keeping qualities of the 50 movement. Again, in both instances, it will be seen that the barrel head entirely

obviates all danger of the main spring coming into contact with the first wheel, so that in the event the spring be unevenly wound 55 or unwound, it will bear against the barrel head, instead of against the first wheel.

Having fully described our invention, what we claim as new and desire to secure by Letters Patent, is:— 60

1. In a watch movement, the combination with a dial plate and top plate, of a barrel provided on its upper end with integral teeth resting in a recessed portion of said top plate and on its lower end with a head, 65 an arbor having the first wheel tightly secured thereto between said head and dial plate, and a cap for securing the several parts in position, substantially as described.

2. In a watch movement, the combination 70 with a dial and top plates, of a barrel provided with integral teeth, the shoulder on its upper end resting in and upon a recessed and shouldered portion of said top plate, and provided on its lower end with a head, 75 an arbor located within said barrel and extending through said head to the dial plate, a first wheel secured to said arbor and located between said dial plate and barrel head, and a cap plate fitting over said barrel 80 for holding the latter in position, substantially as described.

3. In a watch movement, the combination with a dial and top plates, of a barrel fitting in an opening in the top plate and provided 85 on its upper end with a shoulder bearing on a recessed portion of said top plate, and its outer side against the vertical wall of said opening, said barrel being provided on its lower end with a head, an arbor pivoted at 90 its lower end in the dial plate, a first wheel secured to said arbor between said dial plate and barrel head, and a cap fitting over said barrel and to which is pivoted the upper end of said arbor, substantially as described. 95

Signed at Jersey City, in the county of Hudson and State of New Jersey, this 29th day of January A. D. 1909.

GRANVILLE NUTTING.  
JUSTIN J. SMITH.

Witnesses:

C. HOWARD SLATER,  
OSCAR A. LENDAUER.