

967,429.

F. PHINNEY.
CLOCK.
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Fig. 1.

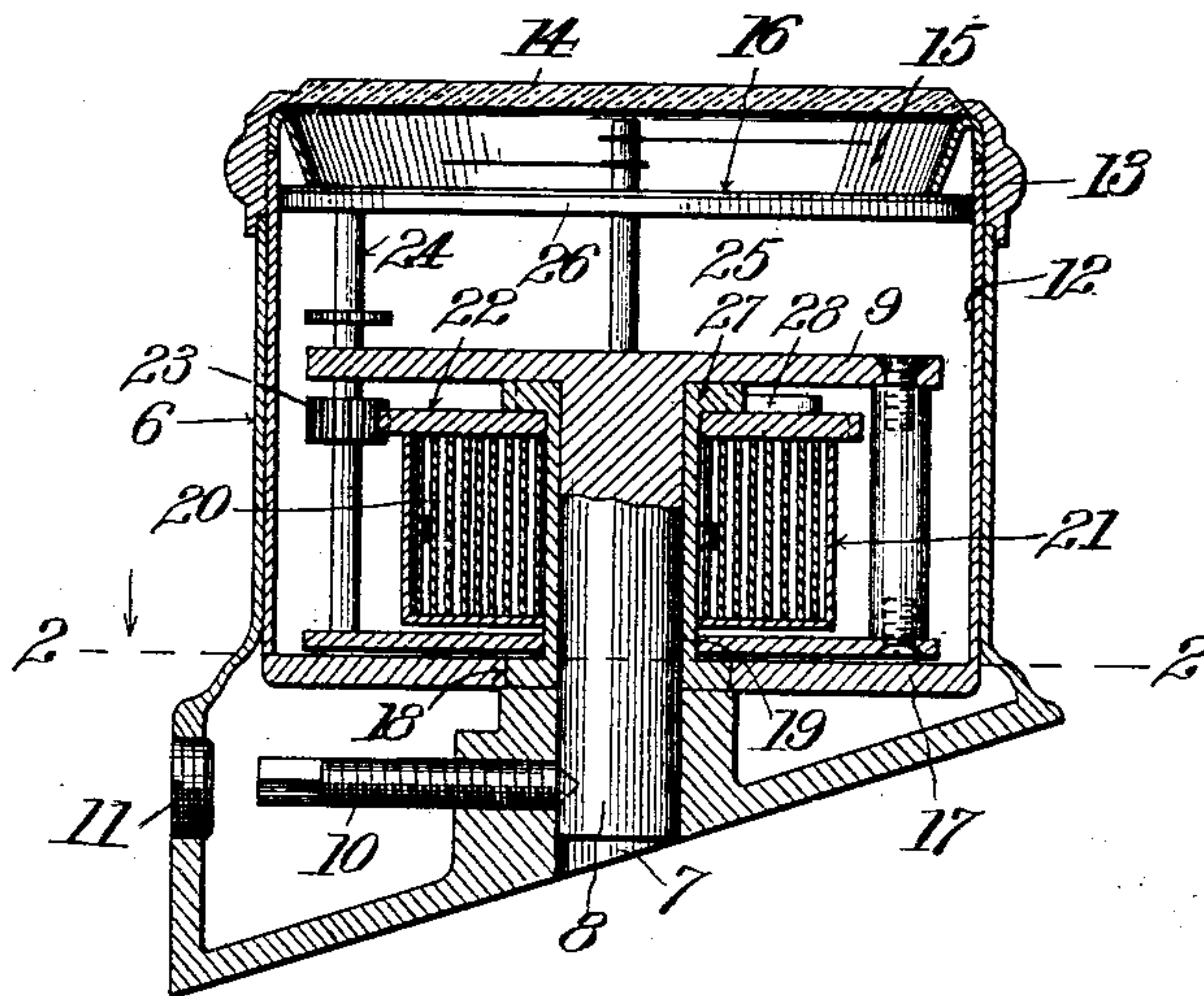
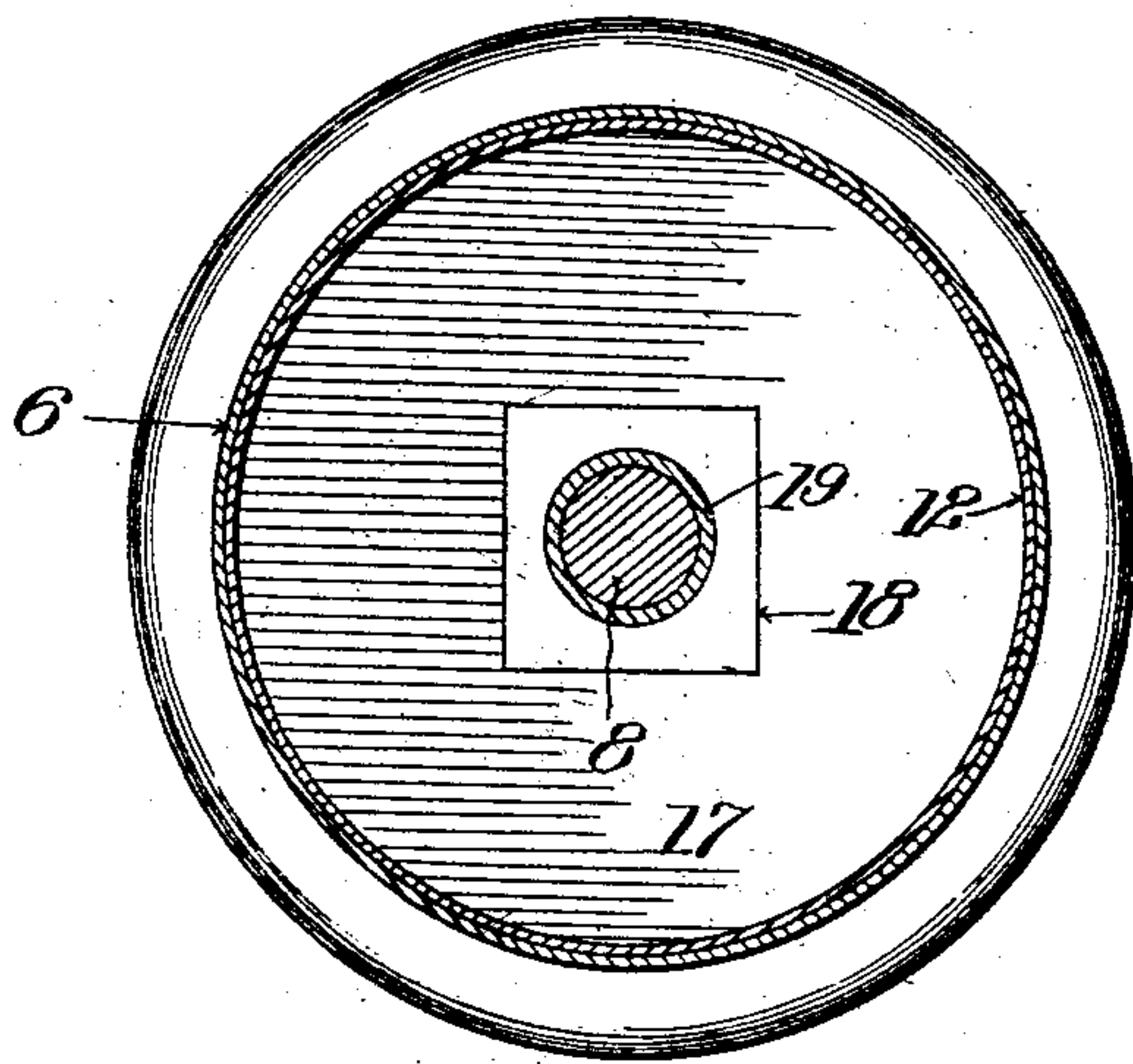


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

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To all whom it may concern:

Be it known that I, FREDERICK PHINNEY, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Clocks, of which the following is a specification.

In the patent to Walker No. 904581 there is disclosed a rim winding clock in which the turning movement of an external rim is communicated to the spring barrel through an internal gear and pinion on the spring barrel arbor.

The present invention is intended as an improvement on the clock shown in said patent, whereby the use of a ring gear and pinion is unnecessary, the power to wind the spring barrel being communicated from the winding rim through an inner casing to a tubular member to which the spring is connected said member being located at the axis or center of the casing and being rotatable to wind the spring without turning either the outer casing or the clock movement.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a central cross section of the clock. Fig. 2 is a section on the line 2—2 of Fig. 1.

Referring specifically to the drawing, 6 indicates an outer cup-shaped casing the base or back of which may be inclined to exhibit the clock face at an angle to the support to which it will be fixed, such for example as the dash board of the vehicle, the clock being particularly intended for use on automobiles and the like. Or, the outer casing 6 may have the form of a simple cup which will be attached to a support in any suitable manner. In the embodiment shown the casing has a socket 7 at the back which receives a stud 8 projecting from one of the movement plates 9, the stud 8 being held in position by means of a screw 10 or the like, accessible through a hole normally closed by a screw plug 11 in the wall of the outer casing. When a plain outer casing is used the stud 8 may be fixed thereto by screws or in any other suitable way.

Fitting at a working fit within the outer casing 6 is an inner casing 12 on the front end of which is screwed the winding rim 13 which carries the glass 14 and the reflector ring 15 the inner edge of which fits against the dial 16 at the front of the movement.

The back 17 of the inner casing 12 has a square or other non-circular hole at 18, through which the stud 8 projects, and fitted in this hole is the squared or non-circular end of a sleeve 19 which is rotatably mounted upon the cylindrical stud 8. By means of this construction the sleeve will turn when the inner casing 12 is turned. One end of the spring 20 is fastened to the sleeve 19, and the other end to the spring barrel 21 which carries its gear 22. This gear 22 meshes with a pinion 23 mounted on an arbor 24 which has its bearings in the front and back plates of the movement and which is geared to the clock works in any suitable manner. Illustration of the details of the movement is omitted, since they may be of any suitable kind, except as specified, and will occupy the space 25 between the plate 9 and the front plate 26. At its front end the sleeve 19 has a ratchet 27 engaged by a pawl 28 carried by the gear 22, to prevent back slip.

The clock spring is wound by turning the rim 13. This turns the inner casing 6 and the sleeve 19, which rotates on the center stud 8 and thus winds the spring, the movement remaining immovable, as well as the outer casing. The use, and consequently the cost, of an internal gear and pinion, as in the patent above referred to, are avoided. From the spring the power is transmitted through the gear 22, pinion 23 and arbor 24 to the clock movement.

The invention is not limited to the particular construction illustrated and described, but the parts may be modified in various ways within the scope of the invention.

What I claim as new is:—

1. The combination with a movement, and a central stud supporting the same, of a casing rotatable around the movement and stud, and a sleeve connected to the spring of the movement and mounted to turn on the stud, and engaging the casing, for rotation thereby.

2. The combination of outer and inner casings, the latter being rotatable in the former, a movement within said casings, a central support connecting the movement and outer casing, and extending through the back of the inner casing, and a connection between the back of the inner casing and the spring of the movement to wind the latter when the inner casing is turned.

3. The combination of an outer casing, a movement therein, a central stud between

the back of the casing and the movement, to support the latter, an inner casing rotatable within the outer casing, and a sleeve rotatably mounted on the stud and connected to
5 the spring of the movement and engaging with the inner casing to rotate therewith.

4. The combination of an outer casing, a movement therein, a central support between the back of the outer casing and the
10 movement, an inner casing having an external winding rim, and fitting and rotatable

within the outer casing, and around said central support, and a connection movable around said central support between the back of said inner casing and the spring of the 15 movement.

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

FREDERICK PHINNEY.

Witnesses:

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