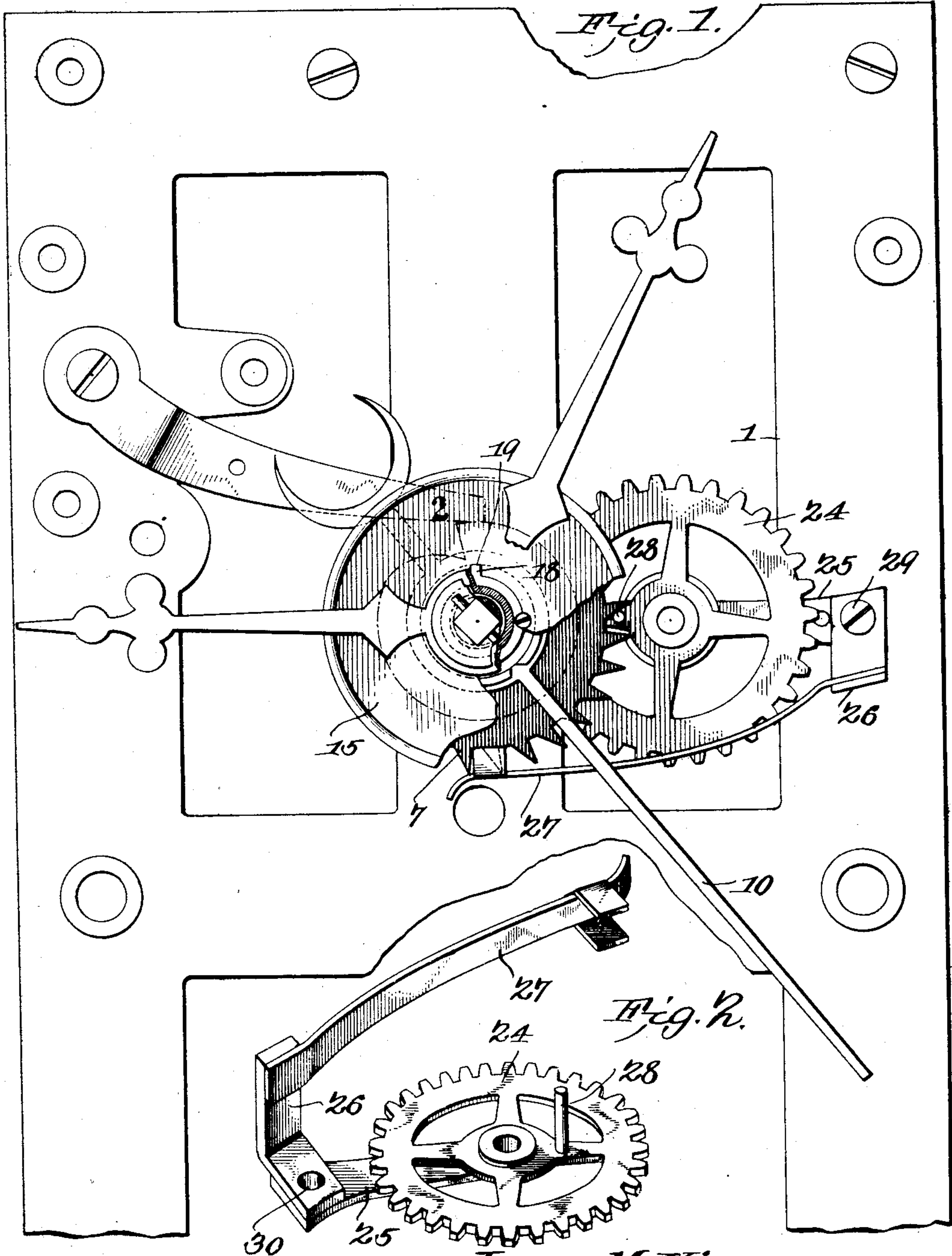


No. 830,722.

PATENTED SEPT. 11, 1906.

J. M. KING.  
CLOCK ATTACHMENT.  
APPLICATION FILED JAN. 8, 1906.

2 SHEETS—SHEET 1.



WITNESSES:

*E. J. Stewart*  
*R. M. Elliott*

*James M. King*, INVENTOR,

By

*Chas. H. Lee*

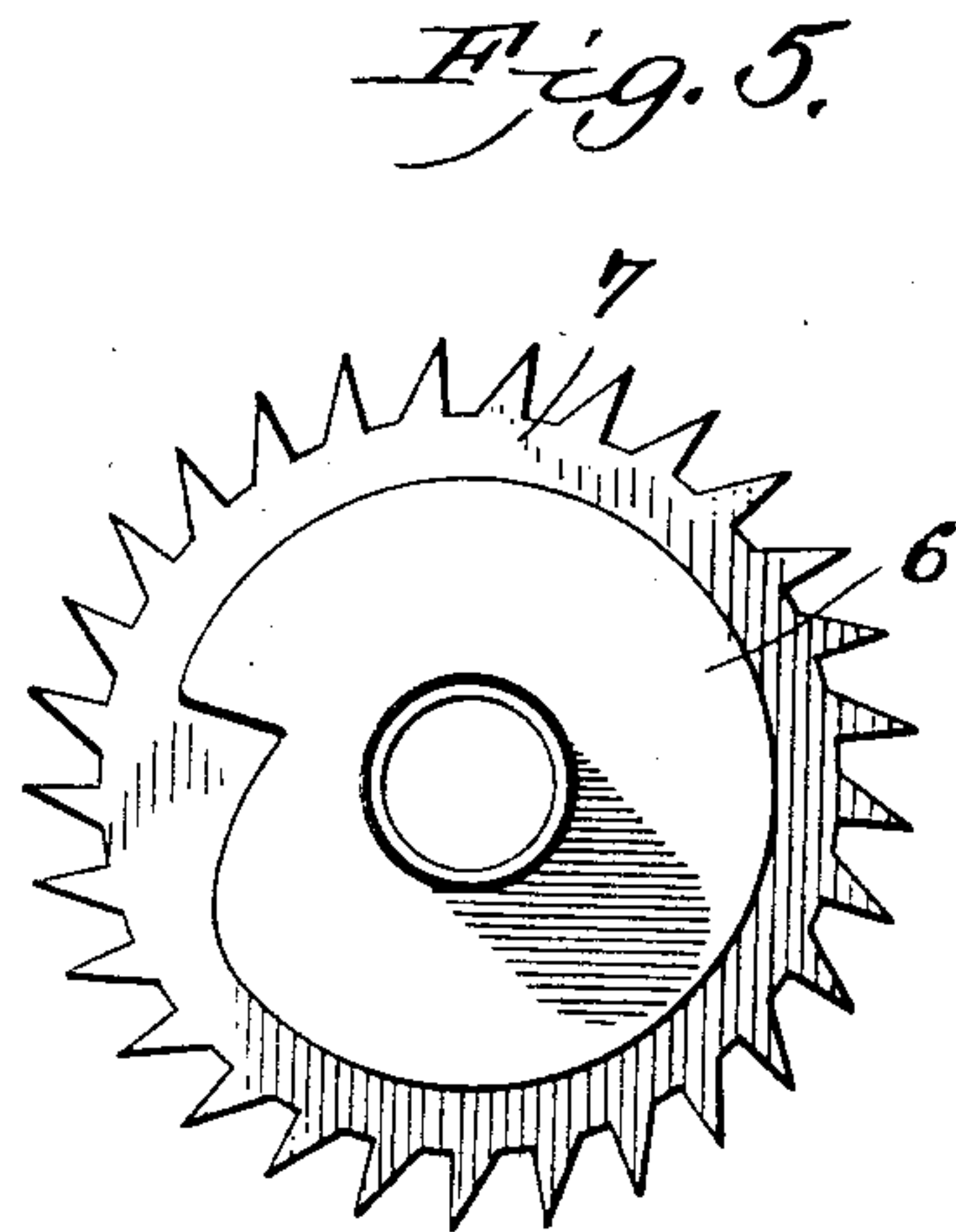
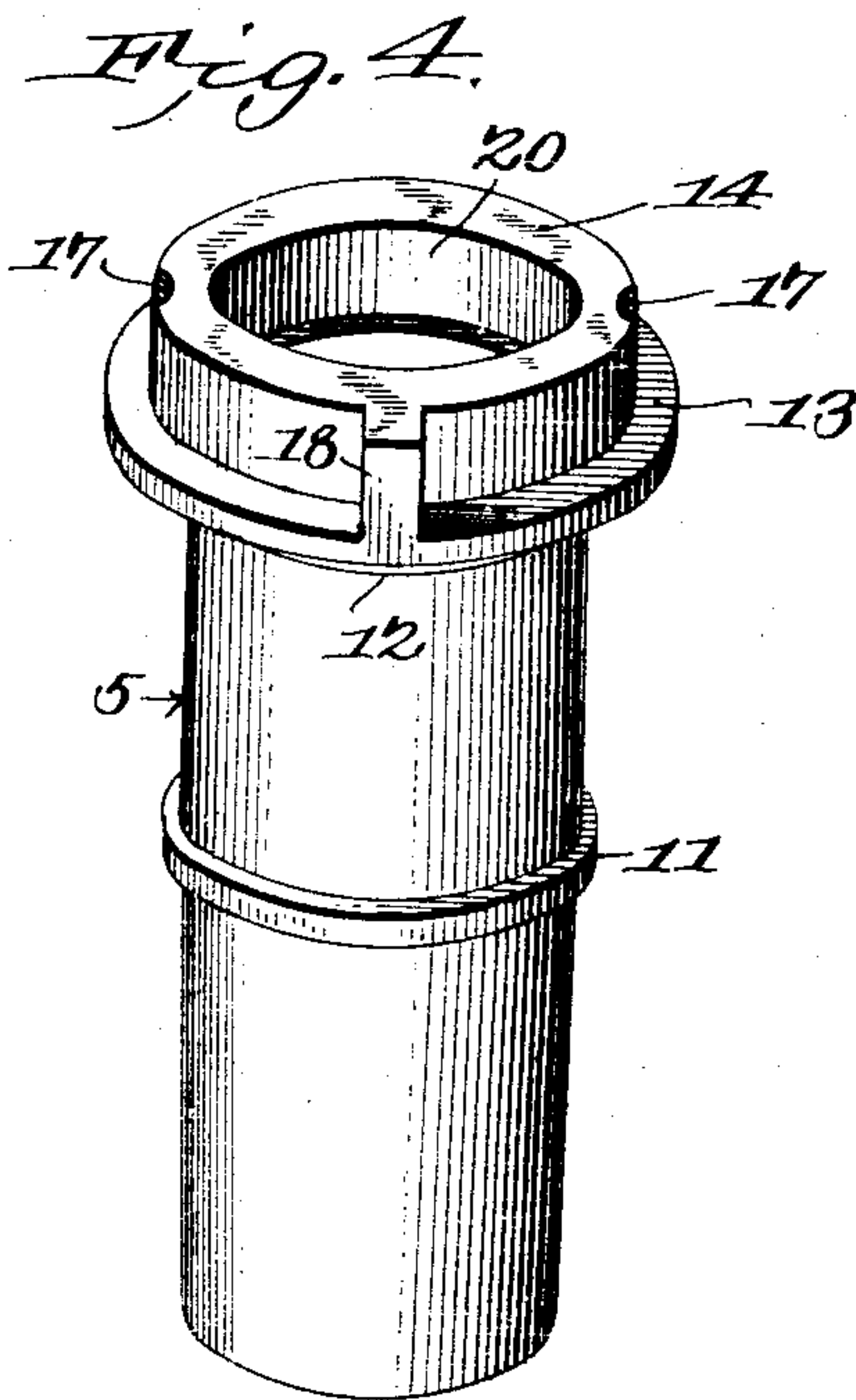
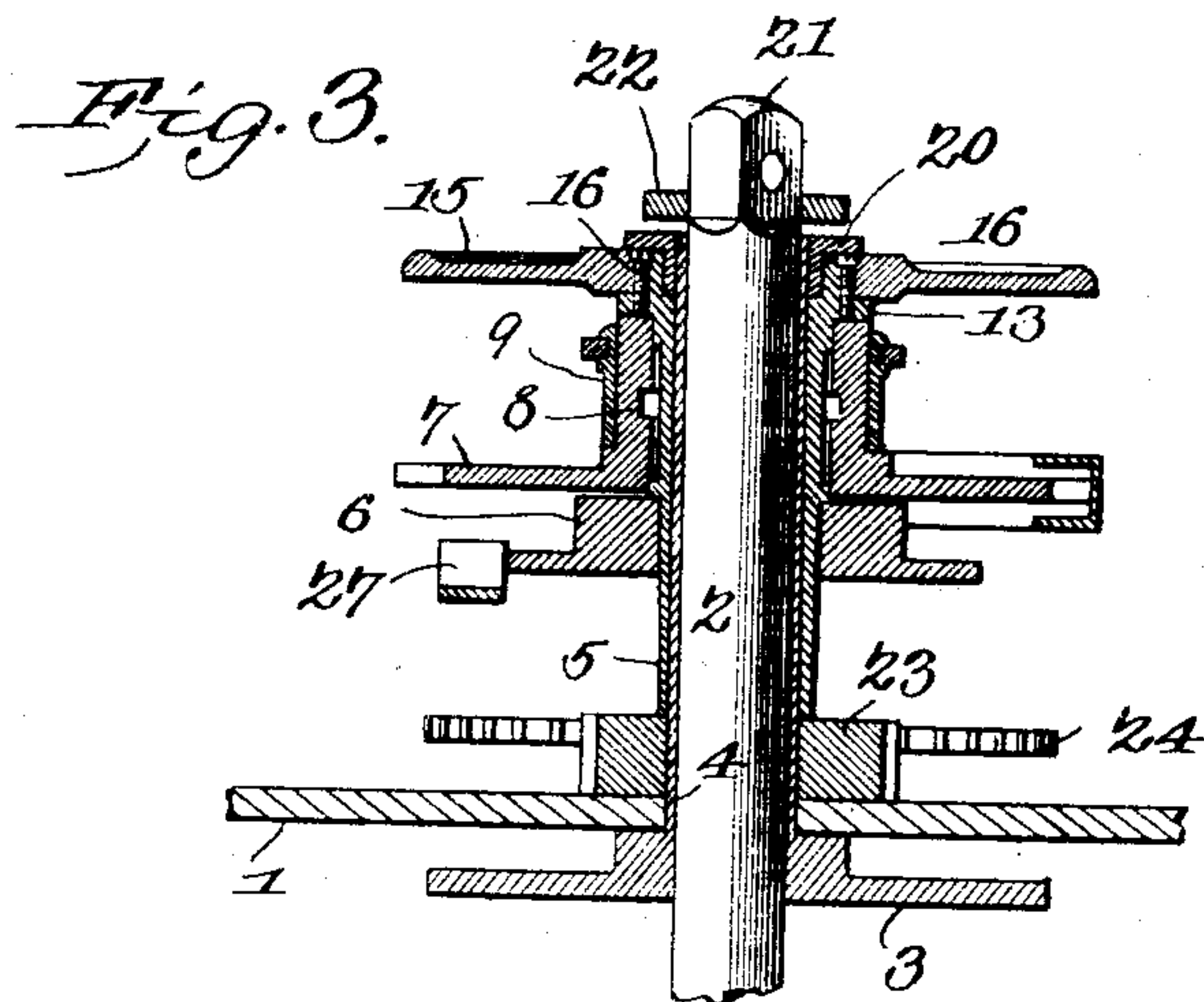
ATTORNEYS.

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WITNESSES:  
*E. J. Stewart*  
*R. M. Elliott*

*James M. King,* INVENTOR,  
By *Chas. H. Snow*  
ATTORNEYS.



# UNITED STATES PATENT OFFICE.

JAMES M. KING, OF MATTOON, ILLINOIS.

## CLOCK ATTACHMENT.

No. 830,722.

Specification of Letters Patent.

Patented Sept. 11, 1906.

Application filed January 8, 1906. Serial No. 295,151.

*To all whom it may concern:*

Be it known that I, JAMES M. KING, a citizen of the United States, residing at Mattoon, in the county of Coles and State of Illinois, have invented a new and useful Clock Attachment, of which the following is a specification.

This invention relates generally to clocks, and more particularly to an improvement in the alarm and calendar mechanisms thereof.

The object of the invention is in a ready and practical manner to actuate the alarm and calendar mechanisms from the center arbor of the clock and in such manner as that the jars and vibrations resulting from the ringing of the alarm will have no effect whatever either upon the calendar mechanism or upon the drive-train of the clock.

With the above and other objects in view, as will appear as the nature of the invention is better understood, the same consists in the improvement in alarm and calendar mechanisms for a clock, as will be hereinafter fully described and claimed.

In the accompanying drawings, forming a part of this specification, and in which like characters of reference indicate corresponding parts, Figure 1 is a view in elevation, partly broken away, exhibiting the frame of a clock with the improvements of the present invention applied thereto. Fig. 2 is a perspective view of the calendar-wheel-actuating gear and the wheel-lock. Fig. 3 is a view in transverse section through the improvements of the present invention. Fig. 4 is a perspective detail view of one of the improved parts. Fig. 5 is a similar view of another of the parts.

Referring to the drawings, 1 designates the front plate of a clock of the usual or any preferred construction, and 2 the center arbor. The center wheel 3 is provided with an elongated hub 4, that fits loosely upon the center arbor and projects through the plate, as clearly shown in Fig. 3, and carries the improvements that constitute the subject-matter of the present invention.

Fitting friction-tight upon the hub is a sleeve 5, which constitutes one of the essential features of this invention and with which is rigidly combined a snail 6 of the usual or any preferred construction.

Above the snail and loosely mounted upon the sleeve is the calendar-wheel 7, the hub 8 of which has combined with it the collar 9 of

the calendar-hand 10. As it is essential that the calendar-wheel shall be free to rotate upon the sleeve 5 without any frictional resistance, the latter is provided with two circumferential bearings 11 and 12, against which the interior terminal portions of the hub bear, as clearly shown in Fig. 3, the intermediate portions thereof being therefore out of contact with the sleeve. The upper end of the sleeve is provided with a circumferential flange 13 and a head 14, the head being engaged by an alarm-dial 15 of the usual or any preferred construction and held against longitudinal movement relatively thereto by the flange 13, screws 16 engaging half-threaded openings in the dial and similar openings 17 in the sides of the head operating to hold the dial positively combined with the sleeve.

In order to relieve the screws from strains when the dial is turned for the purpose of setting the alarm, the head is provided with a lug 18, that engages an appropriate recess 19 in the orifice of the alarm-dial.

The head is counterbored at 20 to receive the collar of the hour-hand, which latter engages the hub of the center wheel, the outer end of the arbor being squared, as at 21, as usual, to receive the minute-hand 22.

It will be seen from the description thus far furnished that the arbor 2 is free to rotate independently of the hub 4, that the hub 4 carries a sleeve 5, fitted thereon friction-tight, that the calendar-wheel is free to rotate independently of the sleeve, and that the snail and alarm-dial move in unison with the sleeve.

Rigid with the hub 4 is a pinion 23, which is engaged by a gear-wheel 24, carried by a plate 25, having an arm 26, to which is secured a pawl 27 to engage the teeth of the calendar-wheel, as usual, to hold it against accidental rotation. The gear 24, which is permanently combined with the plate 25, carries a pin 28, that is adapted to engage with the teeth of the calendar-wheel, and thus move it once in twenty-four hours. The plate 25 is secured to the front plate by a screw 29, as shown in Fig. 1, and engages an orifice 30 in the plate.

It will be seen from the foregoing description by disposing the calendar mechanism and alarm-releasing mechanism upon the sleeve 5 in the manner described that the calendar will be actuated in the usual manner



once every twenty-four hours without any interference therewith of the alarm mechanism and that by so arranging the parts the construction of a clock embodying these two features is materially simplified.

I claim—

1. The combination of a sleeve having a circumferential bearing and a flange, a snail frictionally held on the sleeve at one side of the said bearing, a calendar-wheel mounted on the bearing and confined between the flange and snail to rotate independently of the sleeve, and an alarm-dial mounted on and secured to the sleeve.

2. The combination of a sleeve having spaced bearings and a circumferential flange, a calendar-wheel mounted on the bearings with one end abutting the flange, a snail fixed on the sleeve and abutting one of the bearings, a center wheel having a tubular extension extending entirely through the sleeve, and a pinion rigidly secured to the extension between the center wheel and one end of the sleeve.

3. The combination of an arbor, a center wheel having a tubular extension through which the arbor extends, and a supporting-sleeve held friction-tight on the tubular extension, said sleeve having a counterbore and

a flange at one end and spaced circumferential bearings intermediate its ends.

4. The combination with a center wheel having an elongated hub, of a pinion rigid therewith, a driven gear engaging the pinion, a sleeve mounted friction-tight upon the hub and abutting at one end the pinion, a snail rigid with the sleeve, a calendar-wheel loose upon the sleeve, and an alarm-dial rigid with the sleeve and cooperating with the snail to prevent axial movement of the calendar-wheel.

5. The combination with a center wheel having an elongated hub, of a sleeve mounted friction-tight thereon and having spaced bearings and a circumferential flange, a snail rigid upon the sleeve and impinging the inner bearing, a calendar-wheel loose upon the sleeve and engaging the bearings and abutting at one end said flange, and an alarm-dial rigid with the sleeve and abutting the flange on the side opposite from the calendar-wheel.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES M. KING.

Witnesses:

W. E. GRAHAM,  
CHAS. T. WELCH.