

(No Model.)

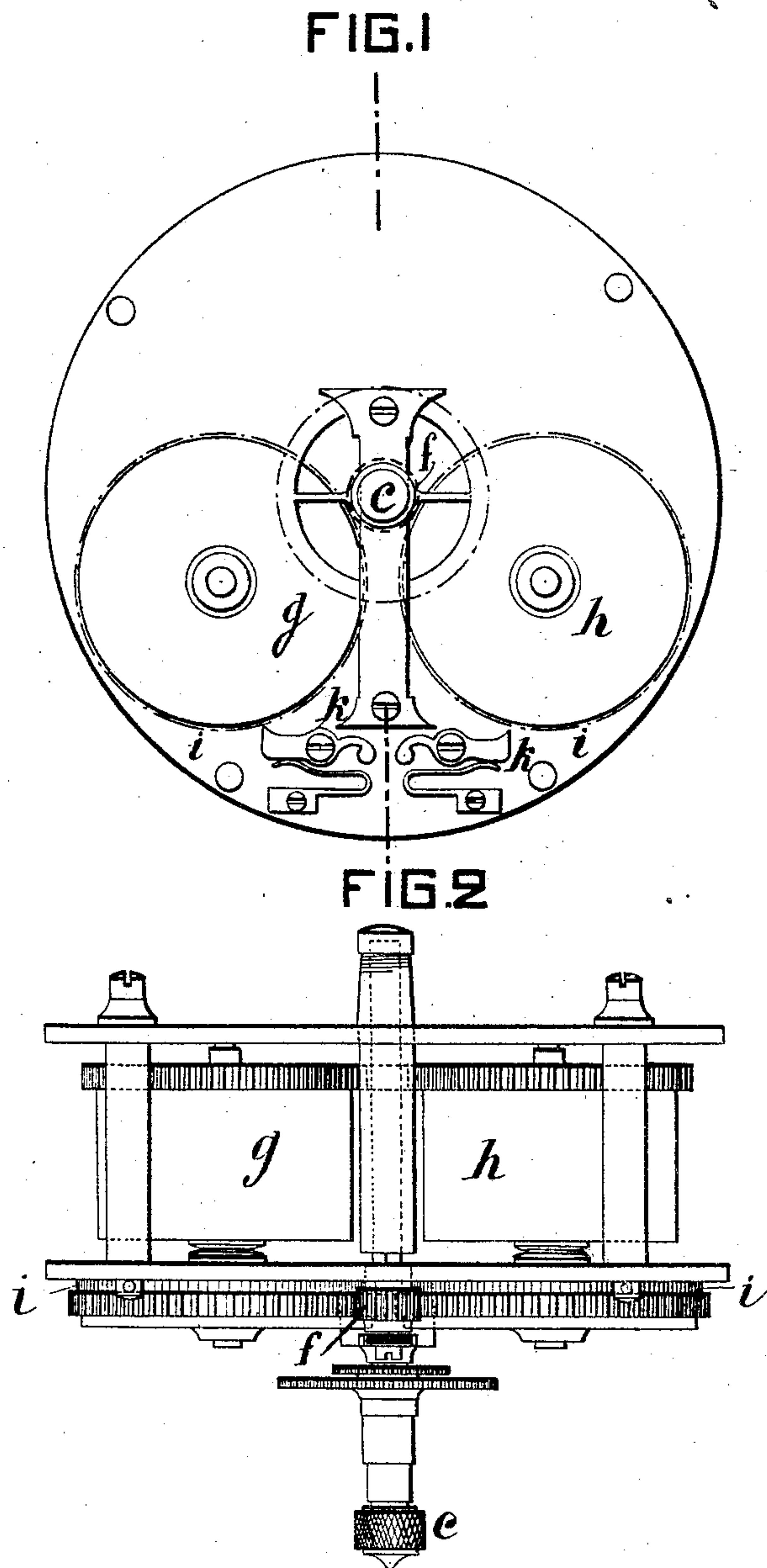
2 Sheets—Sheet 1.

L. F. PORTEBOIS.

WINDING MECHANISM FOR CLOCKS.

No. 321,526.

Patented July 7, 1885.



Witnesses:

John M. Speer.
Gustav Schneppe.

Inventor:

Louis F. Portebois
by his attorney
Briesen & Steel

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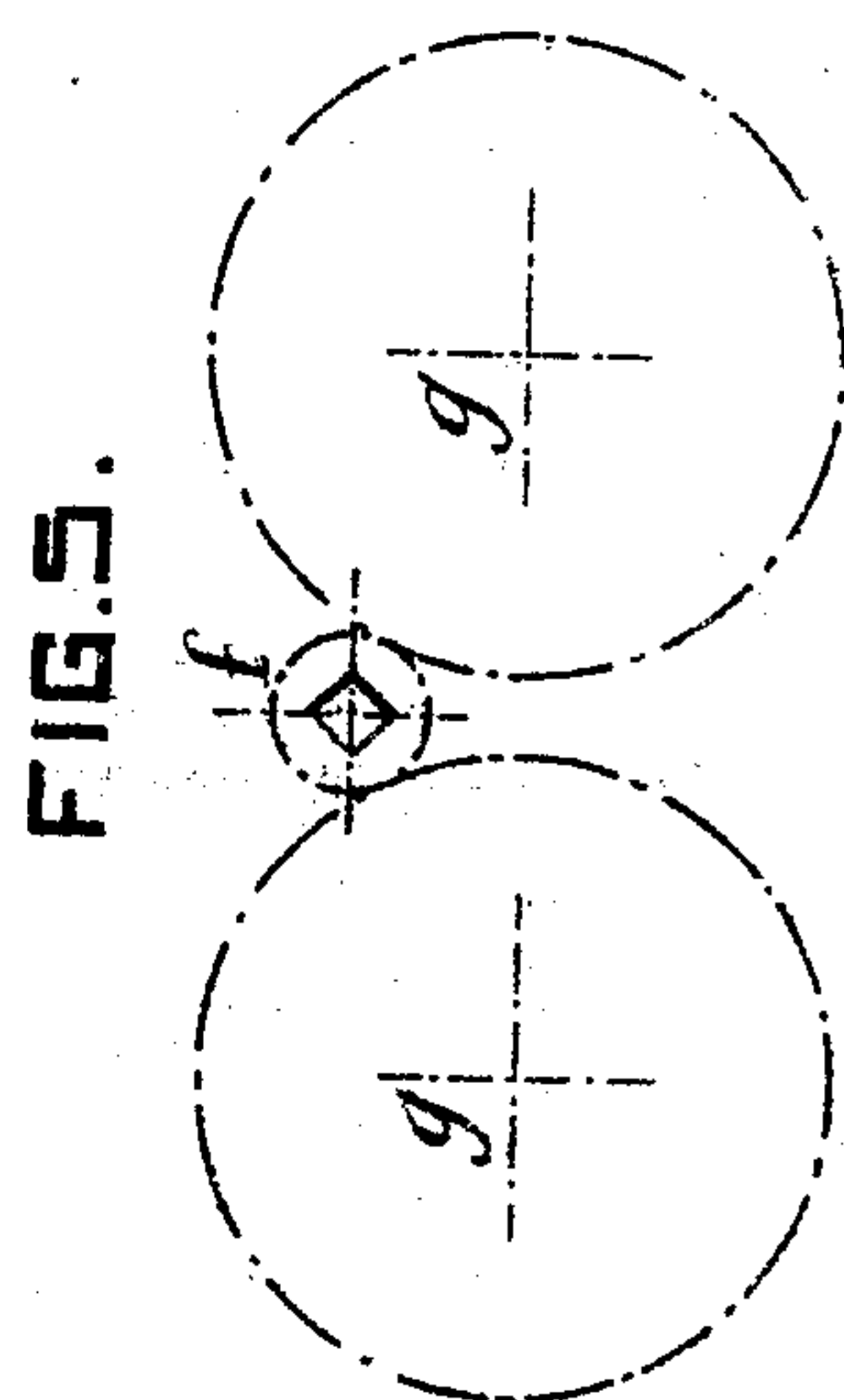
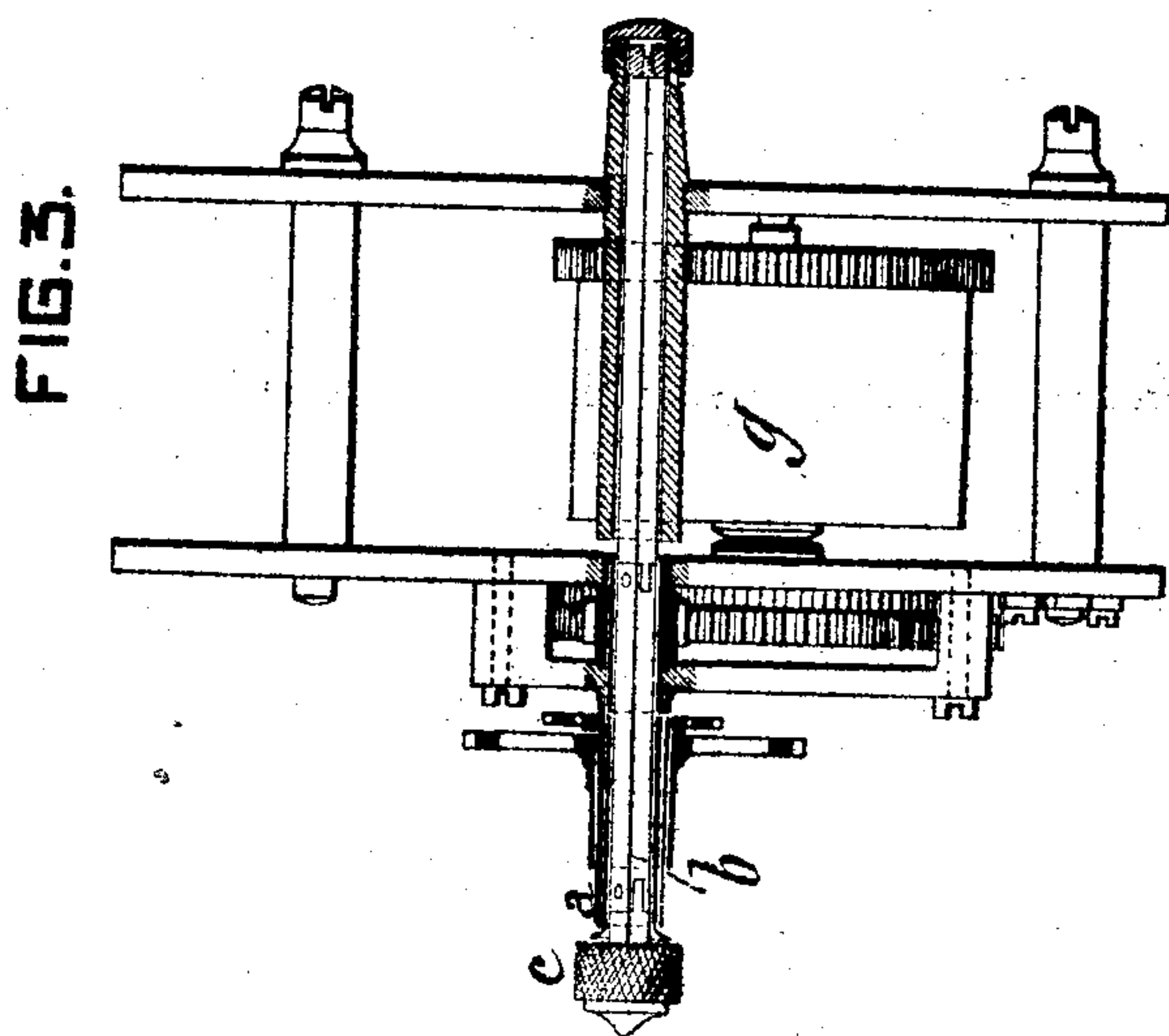
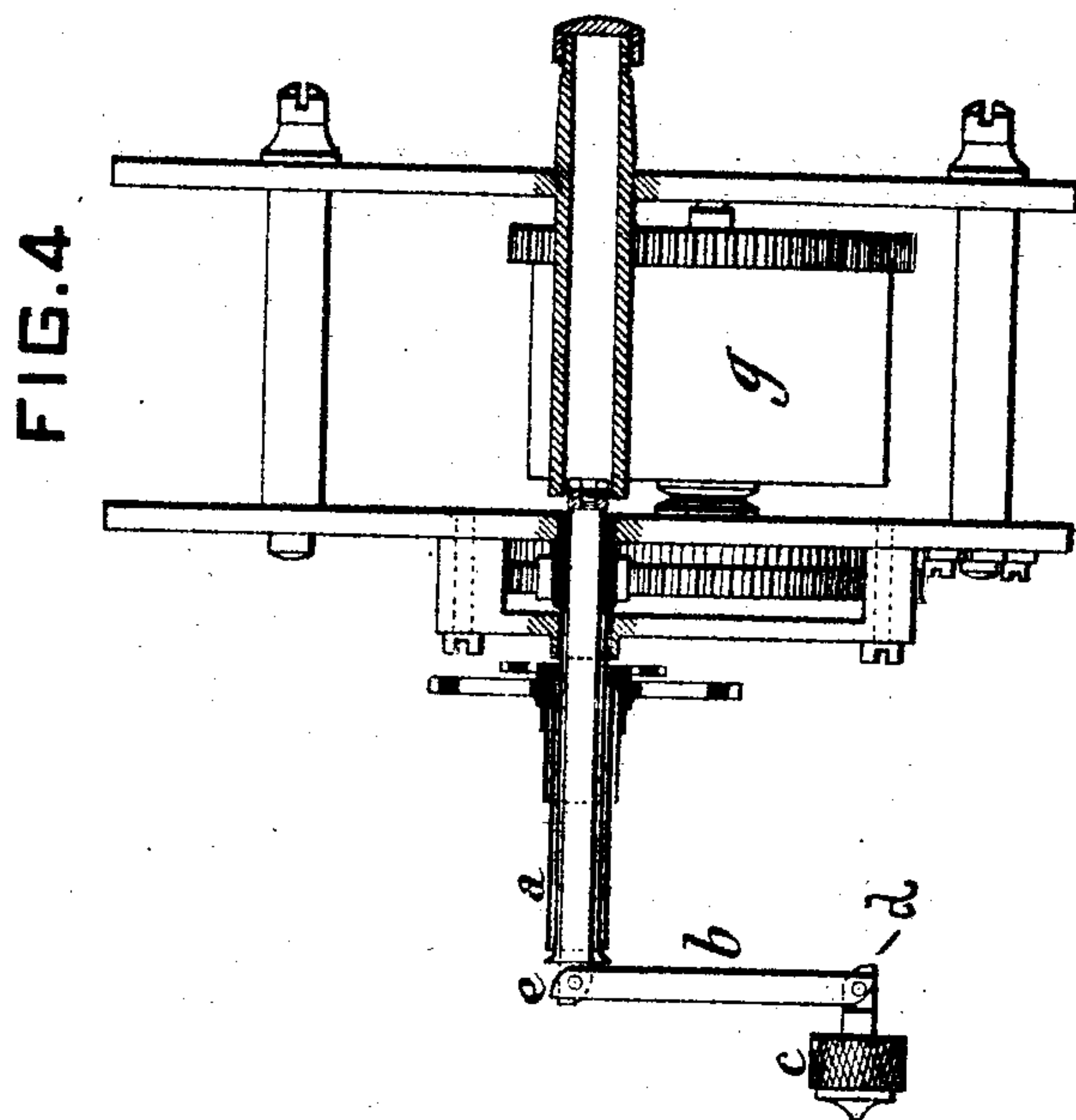
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Inventor:

Louis F. Portebois
by Ponisen & Stealy
his attorneys

UNITED STATES PATENT OFFICE.

LOUIS FREDERIC PORTEBOIS, OF PARIS, FRANCE, ASSIGNOR TO VICTOR
EMILE VERSEPUY, OF SAME PLACE.

WINDING MECHANISM FOR CLOCKS.

SPECIFICATION forming part of Letters Patent No. 321,526, dated July 7, 1885.

Application filed April 24, 1885. (No model.)

To all whom it may concern:

Be it known that I, LOUIS FREDERIC PORTEBOIS, of the city of Paris, France, have invented a new and useful Keyless Central Winding Mechanism Applicable to all Kinds of Clock-Work, of which the following is a clear and exact description.

This invention relates to an improved keyless central winding mechanism applicable to all kinds of clock-work.

In central winding clock-work, more especially those in which two barrels are employed, the winding-stem passes freely through the hand-arbor, and is provided with a knob or turned by a key. It is, however, difficult to apply sufficient force by means of this knob to wind up the barrels; and the object of the present invention is to provide means of facilitating the winding, which consists, essentially, in making the winding stem to slide in and out of the hand-arbor, and in so jointing it that when drawn out it may be cranked for winding.

The accompanying drawings represent a clock-movement provided with the improved central winding mechanism.

Figure 1 shows the front plate of the clock-movement and the click-work of the two barrels. Fig. 2 is a top plan, and Fig. 3 a side view, of the same, with the winding-stem slid inward upon the central arbor, so as to be concealed within the movement when not required for winding. Fig. 4 is a similar view with the stem pulled out and formed into a crank for winding. Fig. 5 shows the mode of gearing the two barrels together.

The same letters of reference indicate the same parts in all the figures.

The winding mechanism may be of any kind, and needs no description.

The arbors of the minute-hand and hour-hand are both mounted on a canon or pipe, *a*, through which the jointed winding-stem *b*

slides freely. The stem is provided with a button or milled head, *c*, or its equivalent, and is jointed at *d*, and also at *e*, to enable it to be bent to the cranked form shown in Fig. 4 when the stem is completely drawn out for the purpose of winding up the barrels. Fig. 4 shows clearly how in this manner a cranked form of winding-stem may be produced, by which the effort of winding is reduced proportionately to the leverage *d e*. Under these conditions the winding can be very smoothly effected, while the construction of the stem enables it to be entirely concealed within the movement.

The stem *a* is made of such form in section that when in the winding position it will operate pinion *f*, in gear with the toothed wheels of the barrels *g h*.

As the barrels are wound up separately, each is provided with a ratchet-wheel, *i*, the teeth of said ratchets being oppositely inclined, and the two pawls *k* being mounted in opposite directions, so that the winding of one barrel shall not unwind the spring of the other barrel. The click-work of the barrels may, however, be of any other kind adapted to this particular kind of clock-work.

I claim—

A central winding mechanism in which the winding-stem slides inward upon the central arbor, so as to be concealed within the movement, and is jointed so as to be converted into a crank when pulled out for winding, as hereinbefore described, and shown in the drawings.

The foregoing specification of my keyless central winding mechanism applicable to all kinds of clock-work signed by me this 26th day of March, 1885.

LOUIS FREDERIC PORTEBOIS.

Witnesses:

ROBT. M. HOOPER,
ALBERT MOREAU.