

(Model.)

3 Sheets—Sheet 1.

G. S. IREDELL.
TOY SAVINGS BANK.

No. 377,259.

Patented Jan. 31, 1888.

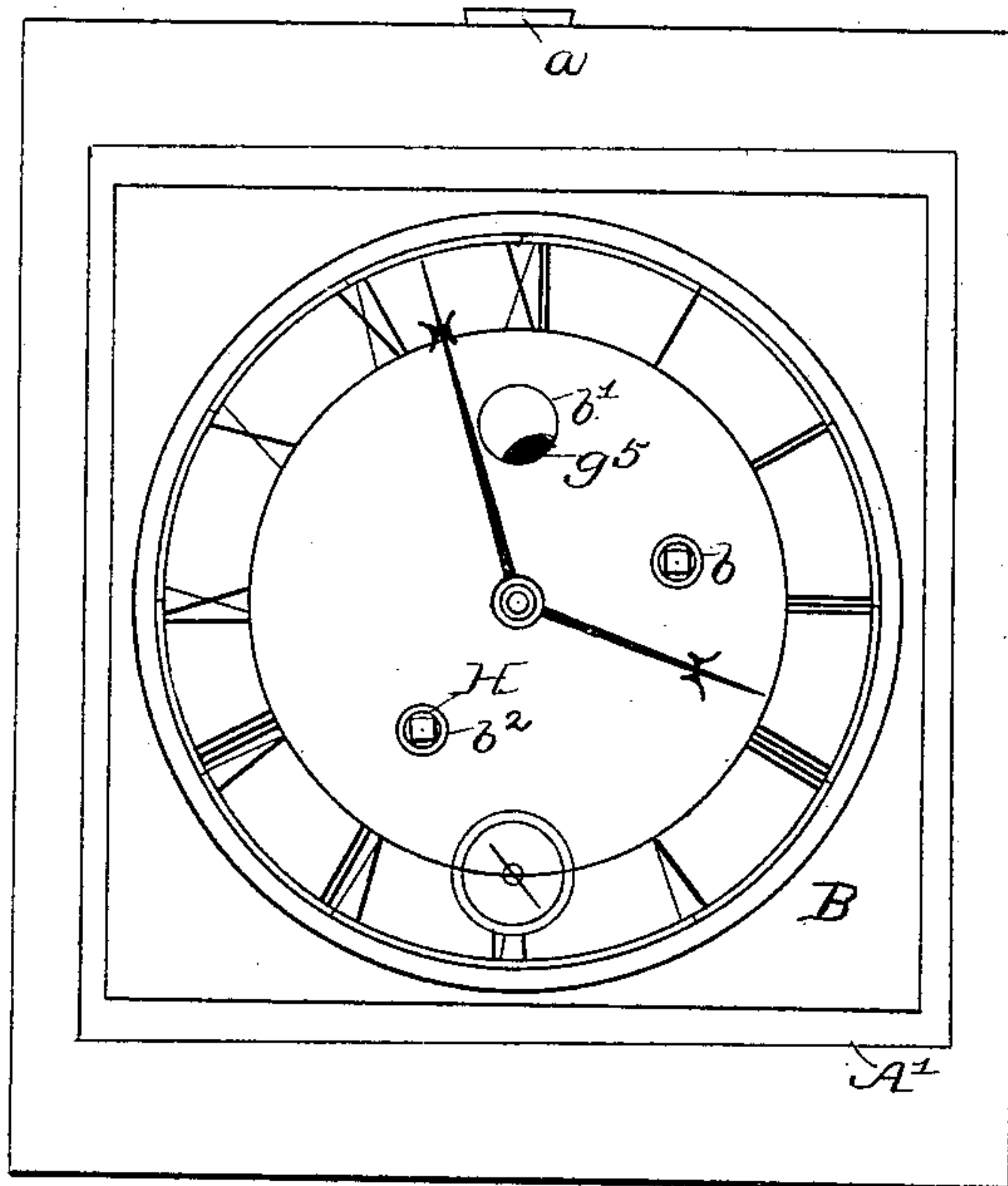


Fig. 1.

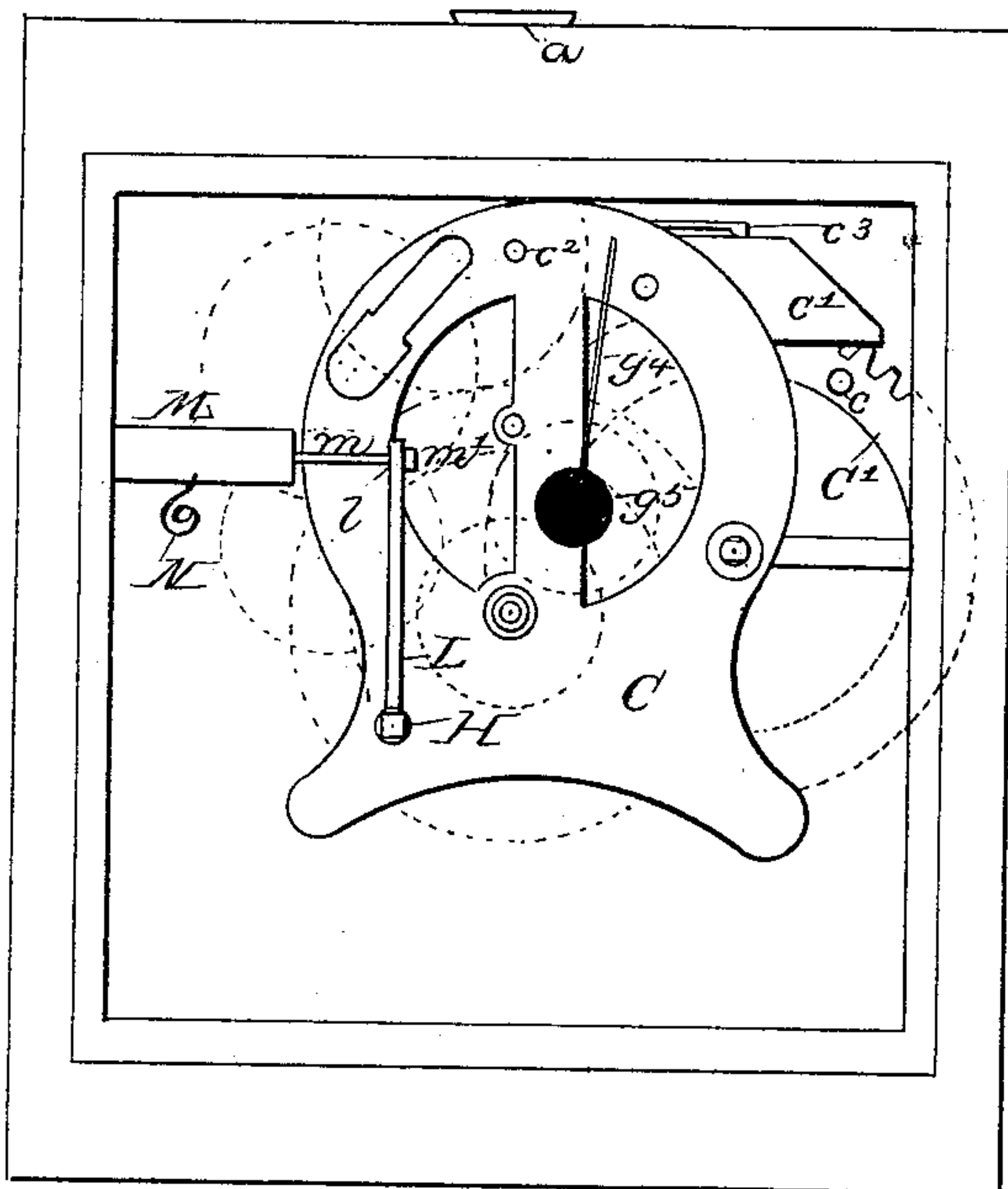


Fig. 2.

Witnesses

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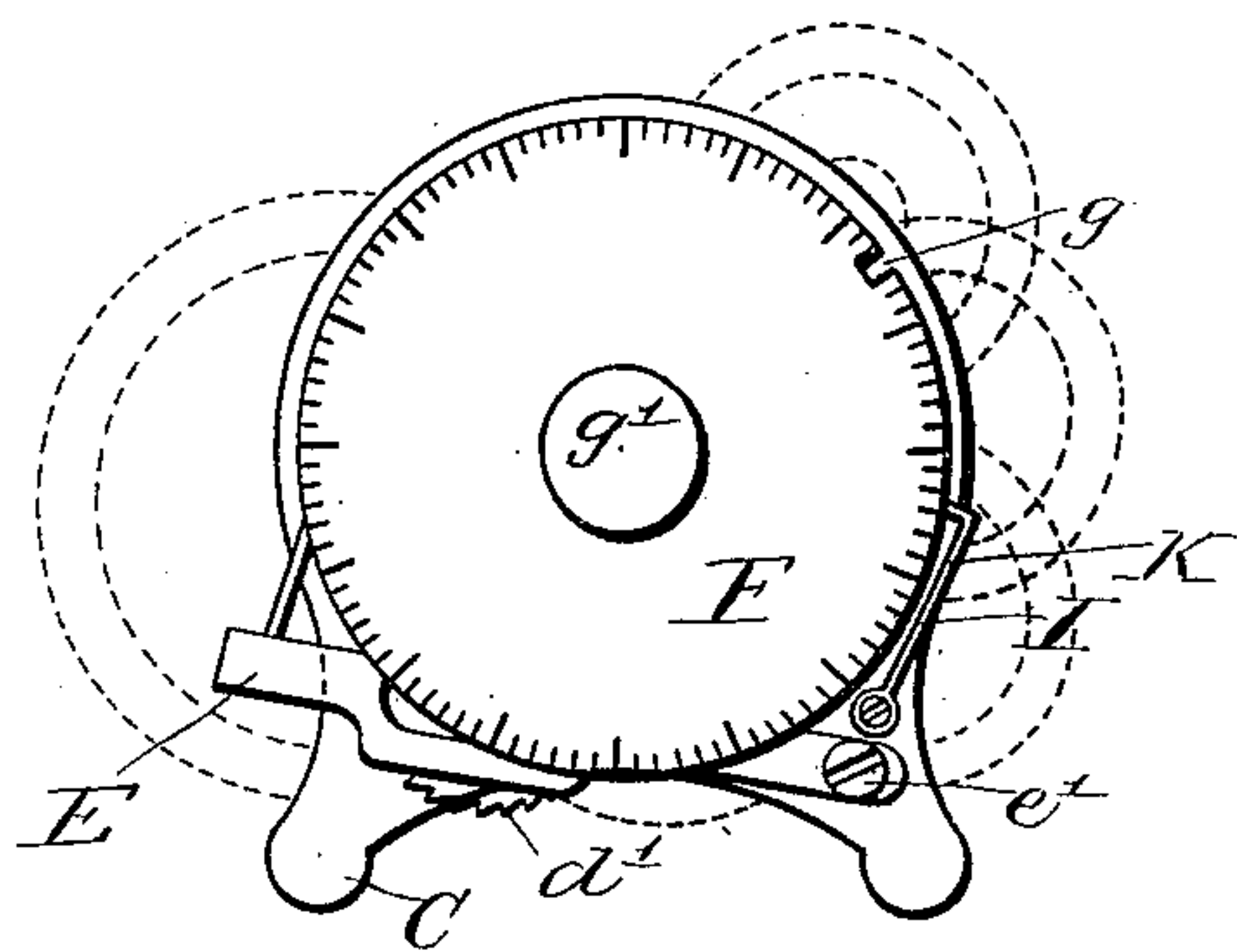


Fig. 3

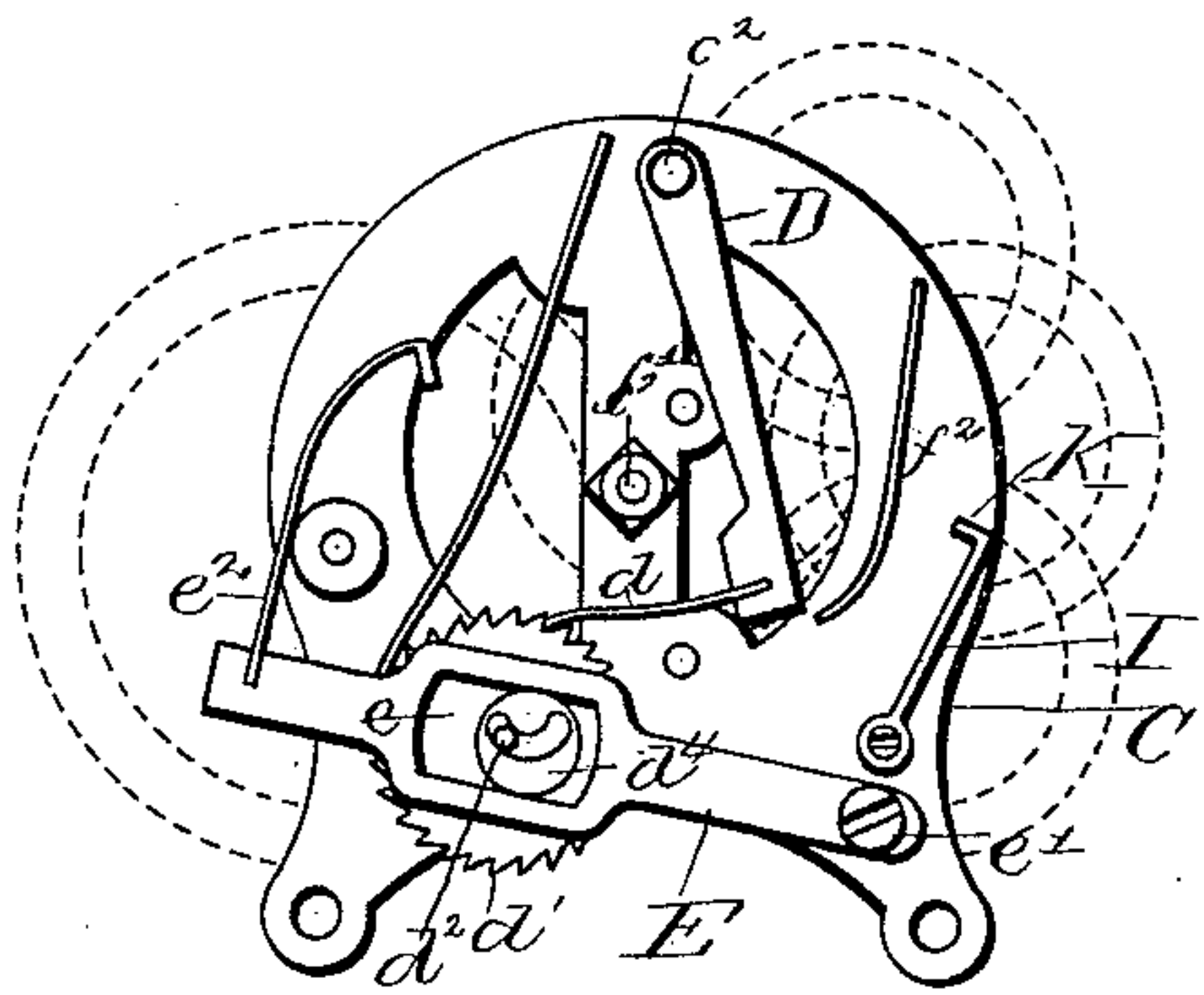


Fig. 4

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Fig. 6

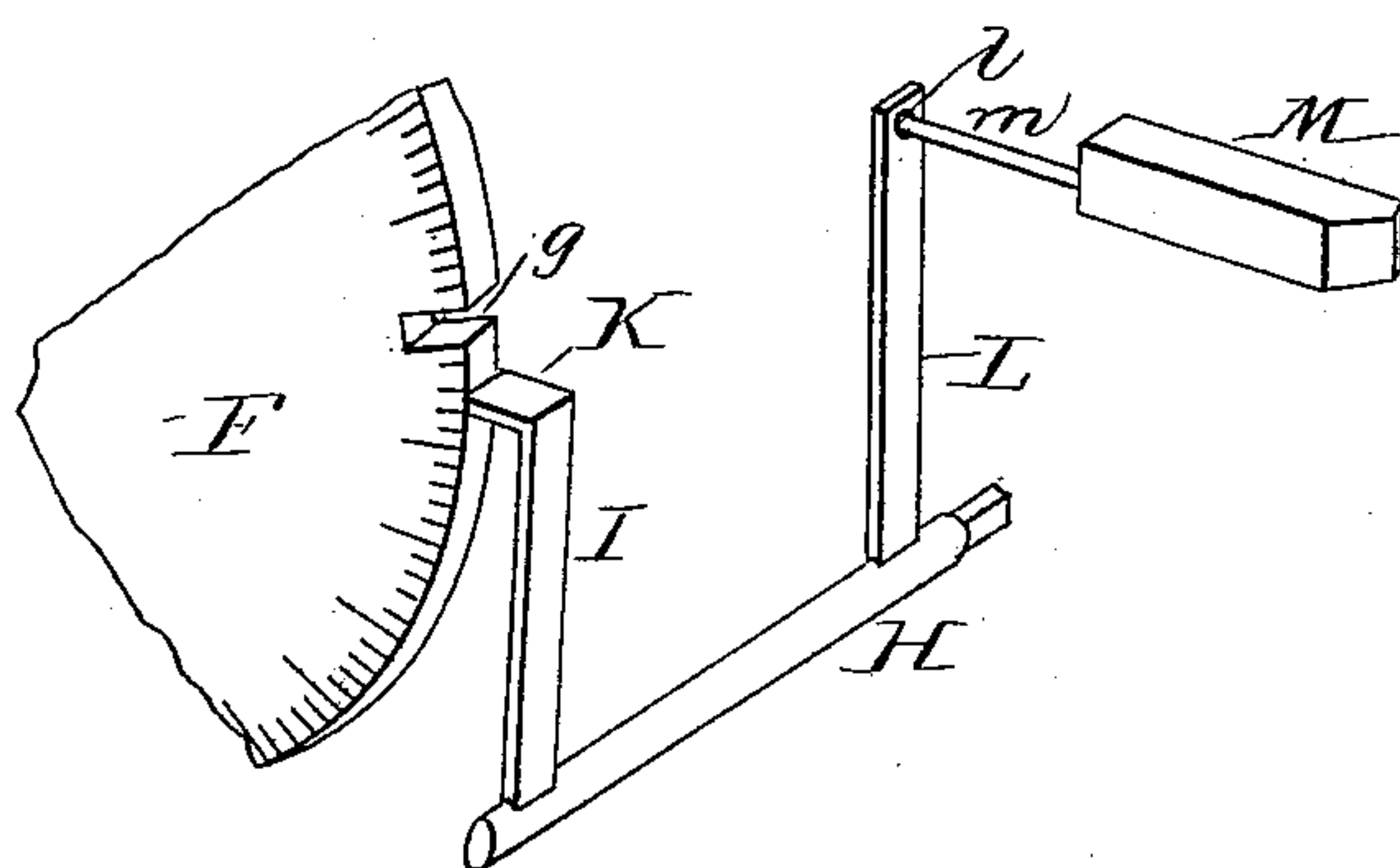


Fig. 7

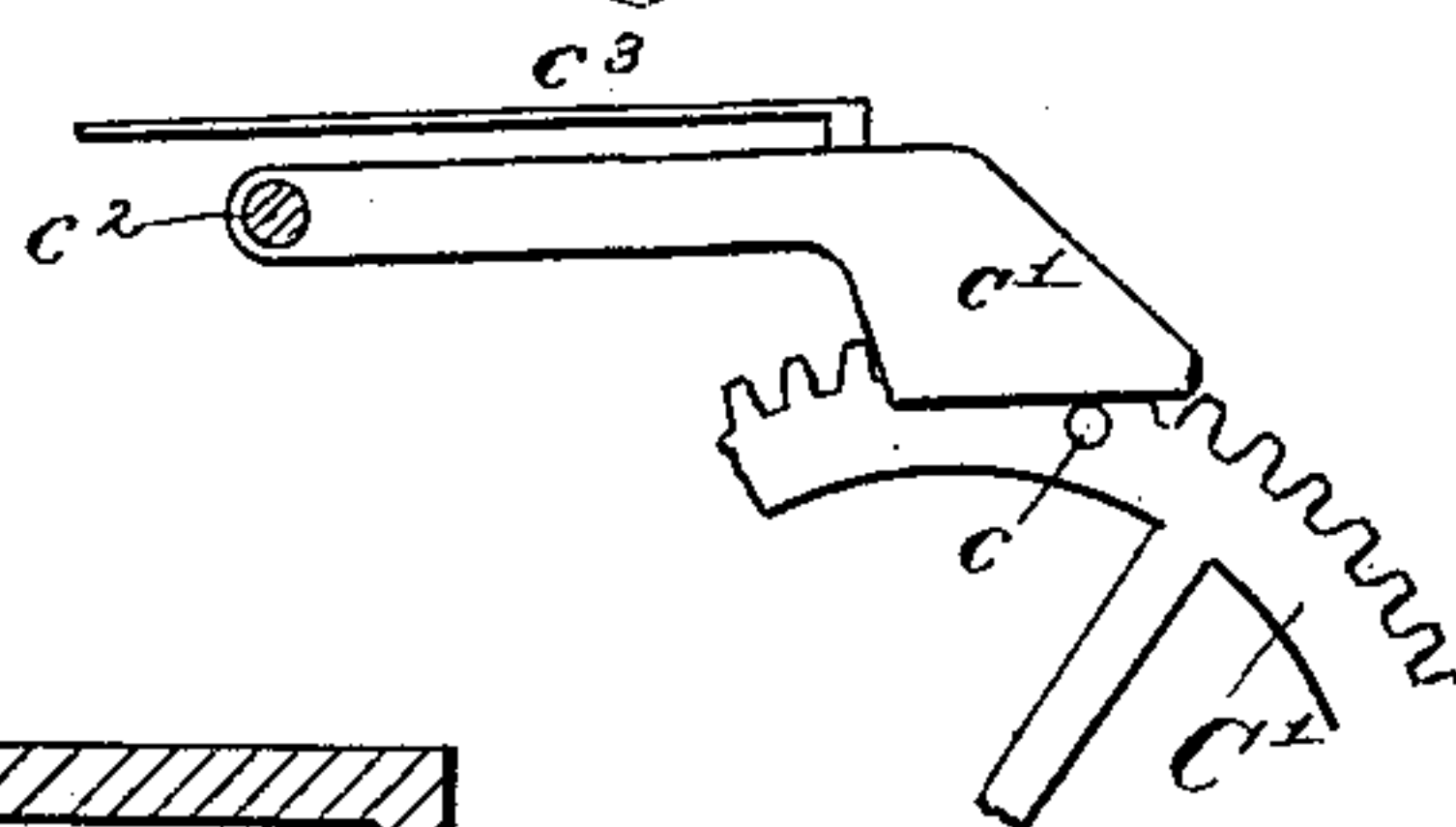
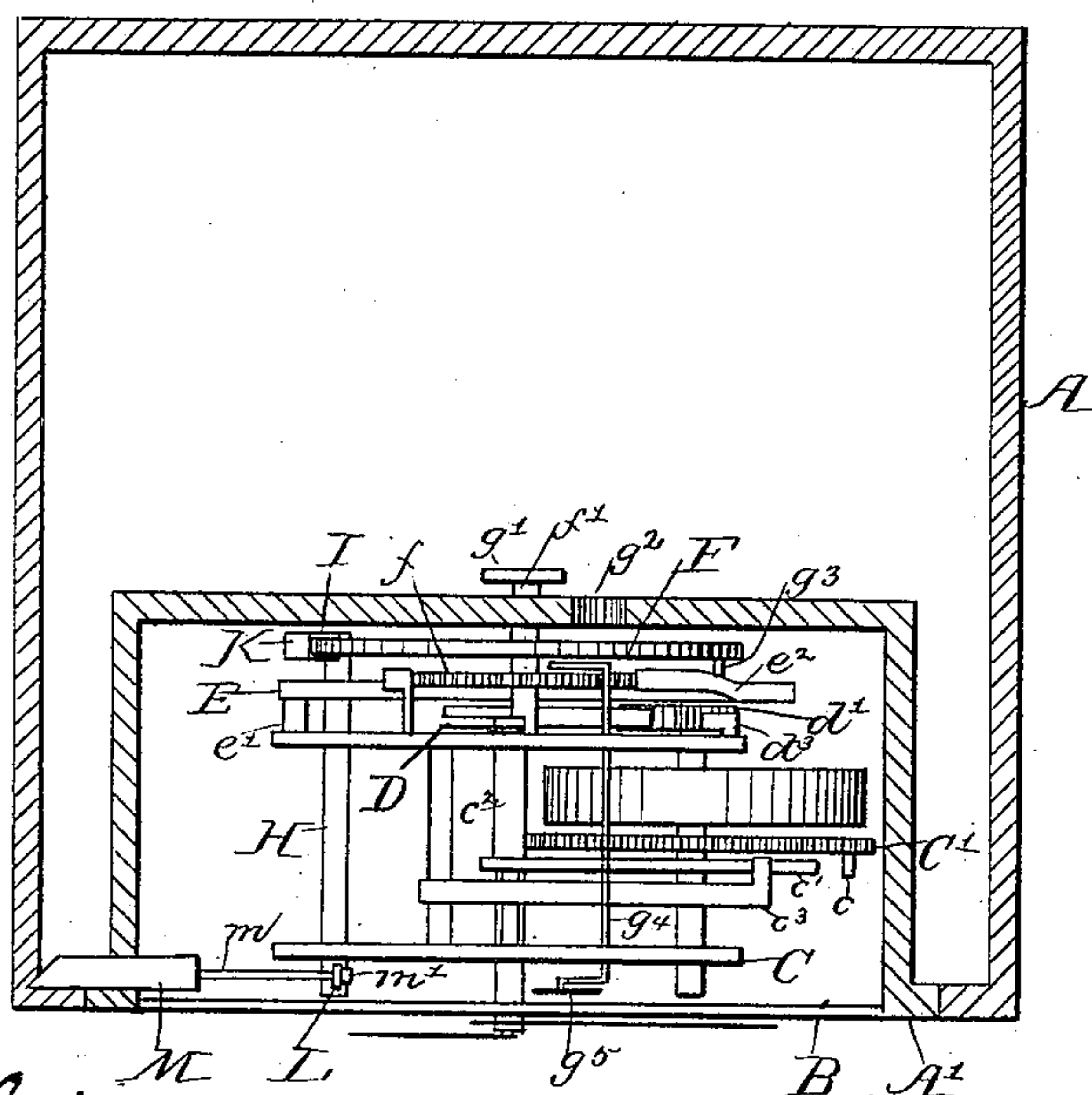


Fig. 5



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE S. IREDELL, OF PHILADELPHIA, PENNSYLVANIA.

TOY SAVINGS-BANK.

SPECIFICATION forming part of Letters Patent No. 377,259, dated January 31, 1888.

Application filed July 13, 1887. Serial No. 244,188. (Model.)

To all whom it may concern:

Be it known that I, GEORGE S. IREDELL, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Toy Savings-Banks; and I do hereby declare the following to be a full, clear, and exact description of the invention, reference being had to the accompanying drawings, which form part of this specification.

This invention has relation to toy savings-banks, and has for its object the provision of a novel form of lock therefor, comprising an ordinary clock with dial and hands and certain mechanism intermediary of the clock-works and the lock, whereby the latter can only be operated at certain predetermined periods to obtain access to the bank.

My invention has for its further object the provision of means for indicating by means of a visual signal when the lock may be operated to open the bank.

Having these objects in view, my invention consists in the combination, with a toy savings-bank, of a clock secured to the bank, and novel mechanism adapted to be operated by the movement of the clock and so arranged as to permit of the bank being opened only at certain predetermined periods.

My invention further consists in the combination, with a toy savings-bank having a locked door and a clock-work mechanism, and devices connecting such mechanism with the lock of said door and so constructed and arranged that the latter can only be opened at certain predetermined periods, of a visual signal and means for causing said signal to be brought into view to indicate when the door may be unlocked.

My invention still further consists in the novel construction, combination, and arrangement of parts, hereinafter described and claimed.

Referring to the accompanying drawings, illustrating my invention, Figure 1 is a front elevation of a toy savings-bank with my improvements applied thereto. Fig. 2 is a similar view with the dial and hands removed from the clock, the clock-wheels being merely indicated by dotted lines. Fig. 3 is a rear elevation of the clock-works and lock-operat-

ing mechanism. Fig. 4 is a similar view with the setting-dial of the lock-operating devices removed. Fig. 5 is a horizontal sectional view of the bank, looking down upon top of the clock-works and lock-operating mechanism; and Figs. 6 and 7 are detail views of parts of the latter.

A indicates the bank, which may be of any suitable configuration, and is provided with the ordinary orifice, *a*, for the reception of money.

A' designates the door of the bank, and B the dial of a clock secured to or set in said door. The sectional view Fig. 5 shows the clock-work set in a cavity or box formed in the door, and this is the preferable form, the dial being flush with the face of the door. The dial B has the hours and minutes marked off in the ordinary way and the winding-hole *b*. It is also furnished with holes *b'* and *b''*, through the former of which appears at proper times the visual signal, indicating that the door may be unlocked, and through the latter is passed the key, by means of which the bolt may be drawn back, such key being the winding-key of the clock, or, if desirable, a key of different form. As the clock-work mechanism is altogether of the usual form, I have where expedient represented the gear-wheels and other parts of the same only by dotted lines, and will not particularly describe the same, referring by name and letter only to such parts as are intimately connected with the lock-operating devices.

Referring now to Fig. 2 of the drawings, C designates the frame of the clock, and C' the main or driving wheel of the same. Upon the wheel C' is fixed, at or near its outer edge, a laterally-projecting pin, *c*, which at each revolution of said wheel contacts with the edge of a cam plate or arm, *c'*, which is fast on a shaft, *c''*, journaled in frame C, and thereby raises said cam-arm a short distance, its return being assisted by a spring, *c'''*. Upon inspecting Fig. 4 it will be observed that the shaft *c''* projects through the rear frame of the clock-work, and to said shaft is secured an arm, D, that has upon its lower end a spring-dog, *d*, that engages with a toothed wheel, *d'*, which turns upon a shaft, *d''*, set in the frame C, a detent, *d'''*, serving to prevent reverse movement of said toothed wheel. The wheel *d'* has

an eccentric, d^4 , upon its face, and the said eccentric fits within a slot, e , in an arm, E , that is pivoted at e' to the frame C , so that each full revolution of the wheel d' gives an up-and-down motion of limited extent to the free end of arm E . Said arm E carries at its free end a spring-dog, e^2 , that engages with a toothed wheel, f , journaled upon a shaft, f' , fixed in frame C , and a detent, f^2 , serves to prevent reverse motion of the wheel f . The toothed wheel f is secured to the back of a flat disk, F , and said disk turns upon the shaft f' with the toothed wheel f . This disk forms at one and the same time the numbered plate, by means of which the period at which the lock may be opened is indicated, and the tumbler controlling the movement of the same. The disk is, as indicated, provided with a scale near its edge, the divisions of which may represent hours, days, weeks, months, or other periods of time, and at one point of the circumference of said plate there is a notch, g , into which slides a moving part of the bolt, as will be presently described, when the latter is drawn back. A thumb-nut, g' , at the center of the disk serves as a medium for turning the disk when required to "set" the same, the nut projecting through a hole in the casing or portion of the door which surrounds the clock-work, and a hole, g^2 , in the same allowing inspection of the numbers. A pin, g^3 , projects laterally from the inside of the disk F , and as the disk revolves contacts with the end of a U-shaped wire, g^4 , which is pivoted in the frame C , and carries at its outer end a small colored plate, g^5 , which, when the lock is ready to be opened, is by the contact of pin g^3 and wire g^4 displayed through the hole b' in the dial of the clock.

In the lower part of the frame C is journaled a shaft, H , the outer end of which is in line with the hole b^2 in the dial of the clock, and is squared or otherwise shaped to receive a key. Upon the inner end of shaft H is secured an upright arm, I , which terminates in a laterally-projecting lug, K , which, when the disk F is in the proper position, passes into the notch g . Near the outer end of the shaft H is fixed another upright arm, L , which has a hole, l , at its upper end, through which passes a pin, m , projecting from the rear end of the bolt. The bolt is of the ordinary spring-latch type—that is, it has a bevel on one side, so that as the door is closed the bolt will be forced back by contact with the jamb.

M designates the said bolt, and N a spring by means of which it is projected forward. The pin m , it will be observed, has a head, m' , which by contact with the arm L prevents the bolt from going too far forward, and the said pin slides easily in the hole in the arm, so that as the door of the bank is closed the bolt can slide back without moving the arm L .

Operation: The parts being constructed and arranged as described, and the door of the bank being supposed to be open to set the

lock, the disk F is turned around by means of the thumb-nut g' until the desired indicating figure or symbol appears at the hole g^2 . The door may then be closed, the bolt sliding back, in the manner of a spring-latch, as before described, and, the clock-work being set in motion, the bank can only be opened at such time as the notch g and lug K are in alignment, and this time is indicated by the appearance of the colored plate g^5 at the hole b' in the dial of the clock. The lock may at this period be opened by turning the shaft H with a key and the contents of the bank removed. The indicating disk or plate g^5 is of course not absolutely essential, but is of value lest the person setting the plate F should forget the period of time for which the plate is set. As the toothed wheel d' revolves only the distance of one tooth at each full revolution of the main driving-wheel of the clock-work, and as the disk F revolves only the distance of a single tooth of the wheel f at each full revolution of the wheel d' , it is apparent that the disk F may be set so that the bank can only be opened at a long period of time from the date of closing the same, as in a month or six months or a year, accordingly as the said disk is set with the notch g at a greater or less distance from the lug K .

Having described my invention, what I claim is—

1. In a toy savings-bank, the combination, with the bank and a clock-work, of the notched plate F , the shaft H , the arm I , carried upon said shaft and having lug K , adapted to enter the notch in said plate, the arm L , also carried by said shaft, and the bolt M , connected to said arm L , substantially as described.

2. In a toy savings-bank, the combination, with the bank structure and the clock-work carried thereby, of the cam plate or arm c' , shaft c^2 , to which said arm is secured, arm D upon said shaft, and dog d , toothed wheel d' , carrying eccentric d^4 , slotted arm E , embracing said eccentric, dog e , carried by arm E , toothed wheel J , and notched disk F , moving therewith, shaft H , and arms I and L , the former having a lug, K , adapted to enter the notch in the said disk, and the latter being connected to sliding bolt M , all constructed and operating substantially as described.

3. In a toy bank, the combination, with the bank structure, of a time-lock and a visual signal operated thereby and indicating by its position the condition of said lock, the dial of said time-lock having a hole, b' , in its face, through which said signal is exposed, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of July, 1887.

GEORGE S. IREDELL.

Witnesses:

JOS. B. CONNOLLY,
R. DALE SPARHAWK.