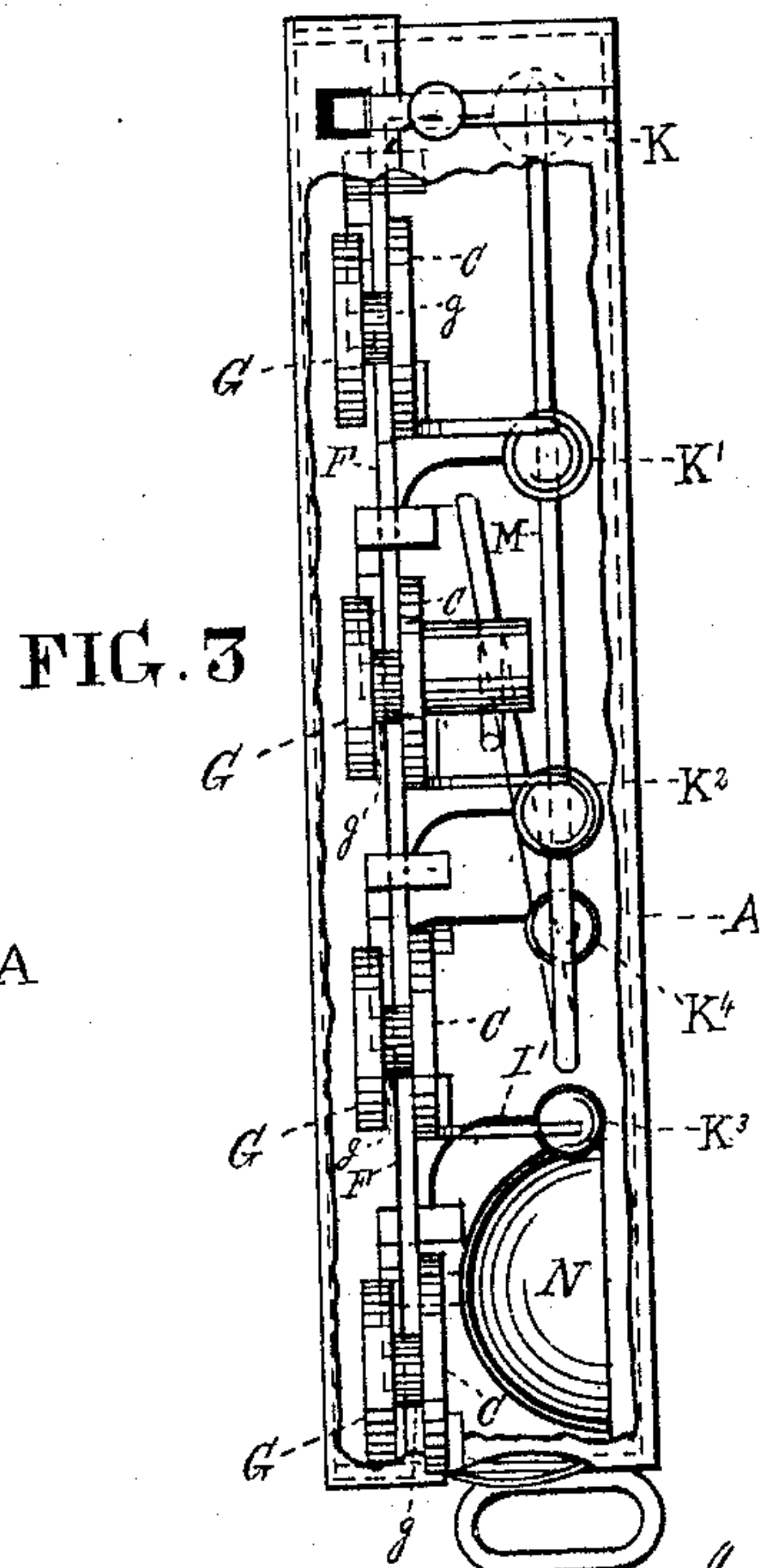
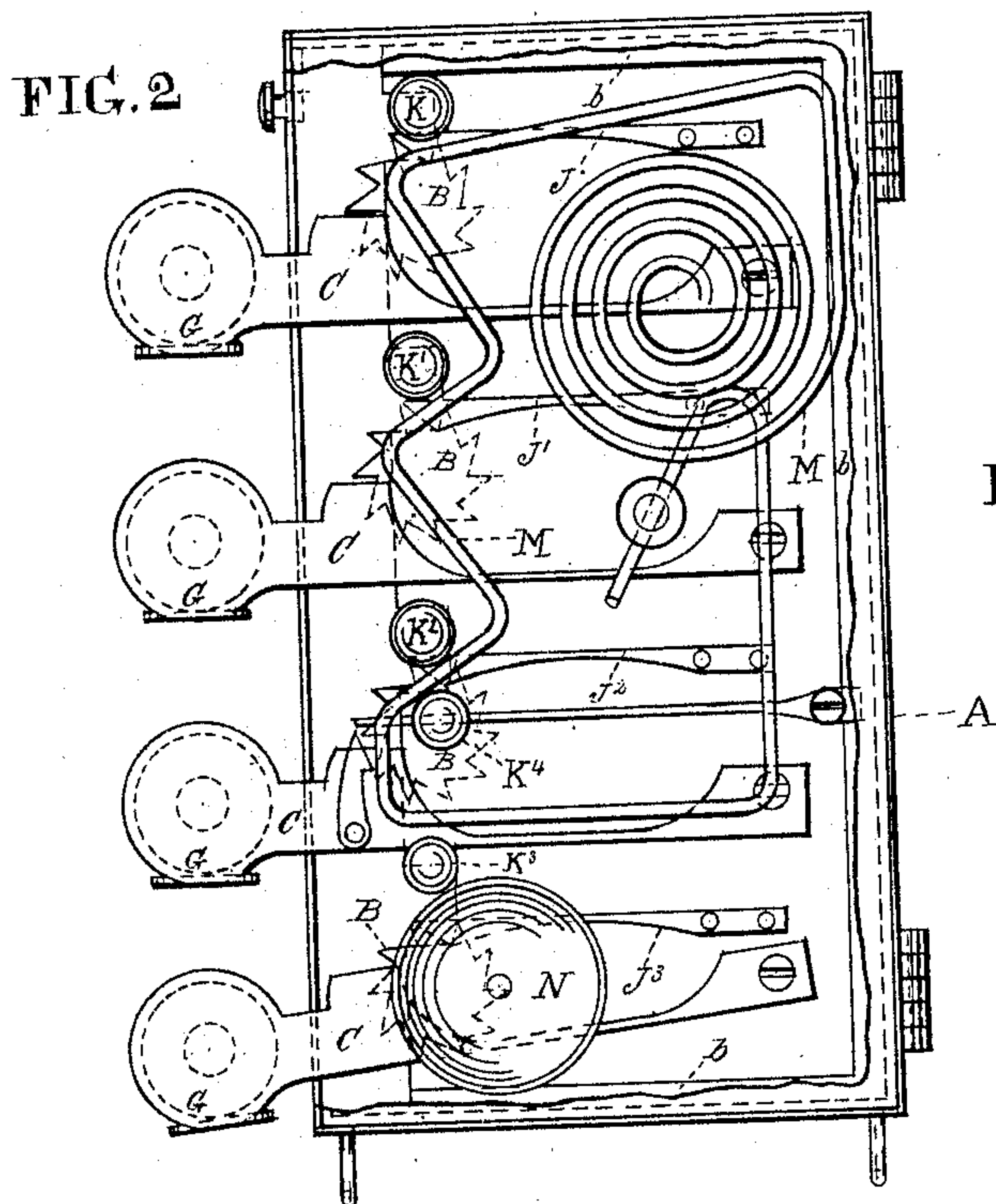
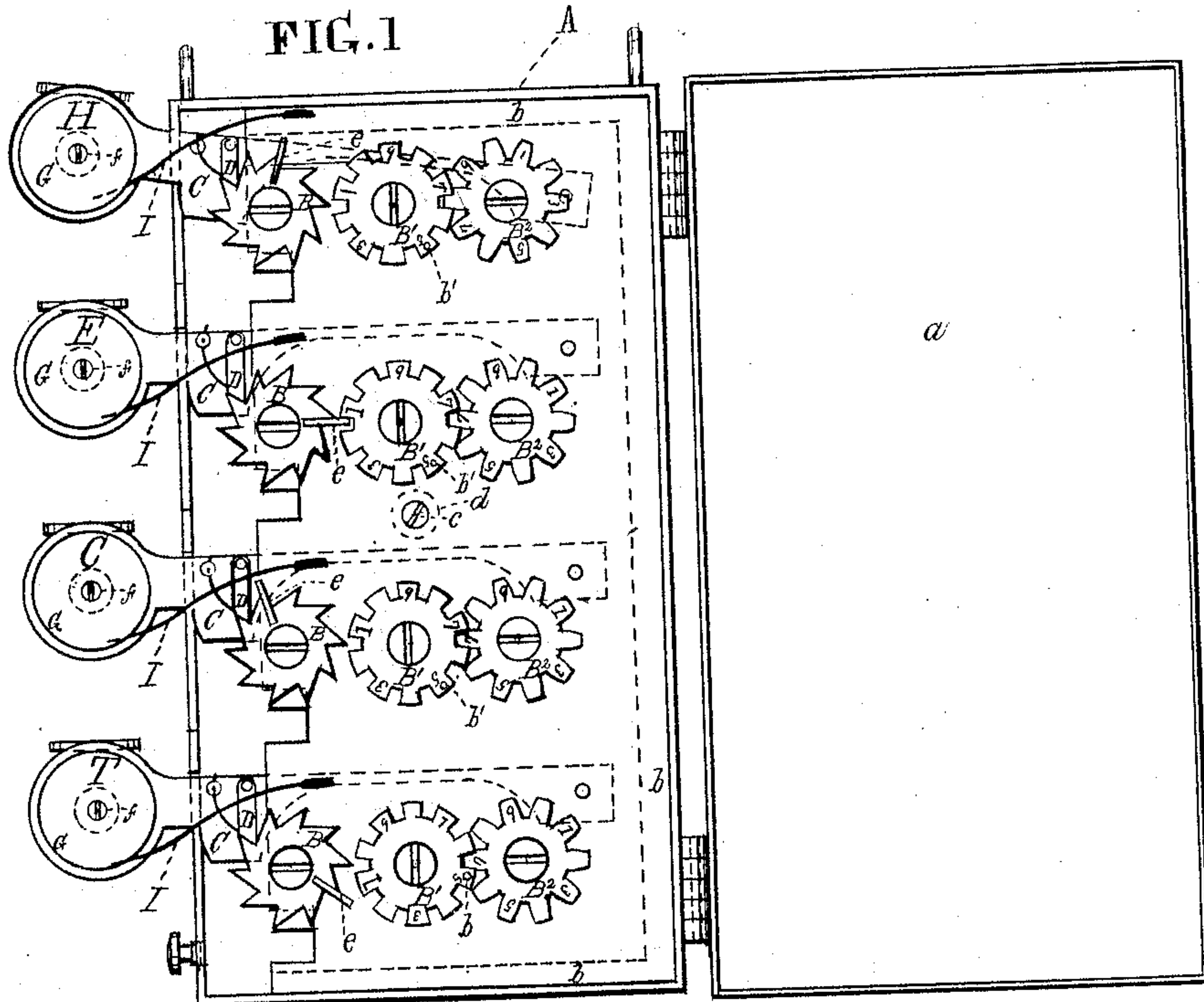


D. ELDRIDGE.
Fare-Registers.

Patented Aug. 17, 1875.

No. 166,864.



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DAVID ELDRIDGE, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN FARE-REGISTERS.

Specification forming part of Letters Patent No. **166,864**, dated August 17, 1875; application filed January 30, 1875.

To all whom it may concern:

Be it known that I, DAVID ELDRIDGE, of the city and county of Philadelphia, Pennsylvania, have invented an Improvement in Fare Registers and Annunciators, of which the following is a specification.

My invention relates to a plurality of registers in the same case for registering the several different kinds of fares; and it consists, in the first place, in combining a distinct and separate bell or other annunciator with each visible indicator and register, and operating the annunciator, indicator, and register simultaneously by means of a lever or other suitable mechanism. Each bell has a different tone from all the others, whereby the particular kind of fare registered is made known to the passenger as a safeguard against the conductor registering a kind of fare of lower denomination than the one paid. When the number of different kinds of fares is so great as to make it difficult to have the requisite number of bells or other annunciators of different tones, I have two distinct hammers operated by the lever of one of the registers in such a manner as to strike one after the other, there being a short interval of time between them, whereby their combined sound will be known from either of the others.

The invention, in the second place, consists in combining, with each lever or operating mechanism, a wheel or other visible signal, set in motion simultaneously with and by means of its movement, to convey to the eye the fact of the registering of the particular kind of fare, there being a letter on the wheel representative of the kind of fare.

In the accompanying drawings, Figure 1 is a face view of the register, with the lid *a* thrown open to show the arrangement of the registering-wheels and operating mechanism. Fig. 2 is a rear view of the register, having the back of the case broken away to show the annunciating devices. Fig. 3 is an edge view, having a portion of the front edge of the case broken away to show the interior arrangement of the devices.

Like letters of reference in both figures indicate the same parts.

A is the case containing the registering and annunciating devices, having a lid, *a*, which

may be locked by the agent after the registers are set, and before being handed to the conductor. For each kind of fare there is a series of registering-wheels, shown in Fig. 1. In each set there is a ratchet-wheel, B, operated by means of the spring-lever C, which has a spring-pawl, D, that engages with the ratchet, as seen in Figs. 1 and 2. The lever, at its inner end, is confined to the stationary division-plate F, and rests on the ledges *b b* of the case A, and confined by means of the screw *e* upon the stud *d*. The lever is borne down to move the ratchet-wheel the distance of one tooth for a single fare. When the ratchet-wheel has turned once around the catch *e* comes into a notch of the wheel B¹ and turns it the distance of one notch, which indicates ten, and so on, until the wheel has turned once around; then the pin *b*¹ of said wheel B¹, by catching in a notch of the wheel B², turns it around the distance of one tooth, which indicates one hundred, and so on. This description applies to each of the registers, and as there is nothing new in this construction, a further description is deemed unnecessary.

On each lever C there is an indicating disk or wheel, G, which turns loosely on its pin *f* that projects from one side of the lever. On the face of each disk there is a letter which represents one kind of fare, namely: T, for ticket; C, for cash; E, for exchange, and H for half-fare. When either of the levers is borne down as the hub *b* of the wheel with which it is provided comes against the free end of a spring, I, the latter is moved forward and sets the wheel in motion, giving it a whirl, and the motion of the wheel being noticed by the passenger, if the conductor has operated a lever that registers a lower fare than the one received, the motion of the wheel detects the fraud. As the ratchet-wheels are turned the distance of one tooth, respectively, for registering, they are locked by means of the spring-pawls J, J¹, J², and J³, as seen clearly in Fig. 2. These pawls are provided with hammers K, K¹, K², and K³ for striking the bent wire M and bell N, the hammers being brought into action as the pawls spring back into the notches of the ratchet-wheel, after the teeth of the latter have pressed them downward by their points passing over them, thus

annunciating the fact of the registering of a fare. M is a bent wire, which is fastened at one end in the stud L that projects from the inner side of the division-plate F. The hammers K, K¹, and K² strike upon the wire M for giving notice of the registering of tickets, cash, and exchange tickets, indicated by the letters T, C, and E, respectively, on the signal-wheels, and the hammer K³ strikes upon the bell N for indicating the registering of half-fares, represented by the letter H. The tones of these annunciations are different one from another, effected by the hammers being of different sizes, and being in different positions of the bent wire M. The bell N also gives a different sound from the bent wire M.

In the movement of the lever C, which is provided with the signal-wheel having on its face the letter E to designate exchange tickets, a different sound is produced from those made in the operation of the other levers, the difference being caused by means of the additional hammer K⁴ on the spring I', the spring being operated by means of the spring-catch P, as the lever C returns to its upward position. As the hammer K² strikes the wire M in the downward stroke of the lever C, and the hammer K⁴ in its upward stroke, two distinct

sounds are produced one after the other, whereby the annunciation is distinct from either of the others. If desired, the mode above described of using two hammers may be applied to either of the other registers instead of the one indicated.

The circular visible indicators may be removed and a segment of a circle or plate on the shaft be used, with a vibrating motion or change of position, to indicate to the eye the registry of the fare by this or any similar movement of the visible indicator.

I claim as my invention—

1. The movable visible indicators G, in combination with the bells or annunciators, to indicate the registry of the fare by both sight and sound, substantially as described.

2. The signal-wheels G, or equivalent device, in combination with the levers C, or other mechanism which operates the registering-wheels, in such a manner that each signal shall be set in motion simultaneously with the registering-wheel with which it is combined, substantially as set forth.

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Witnesses:

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