

J. P. Pau,
Station Indicator.
No. 103237. *Patented May 17 1870.*

Fig: 1.

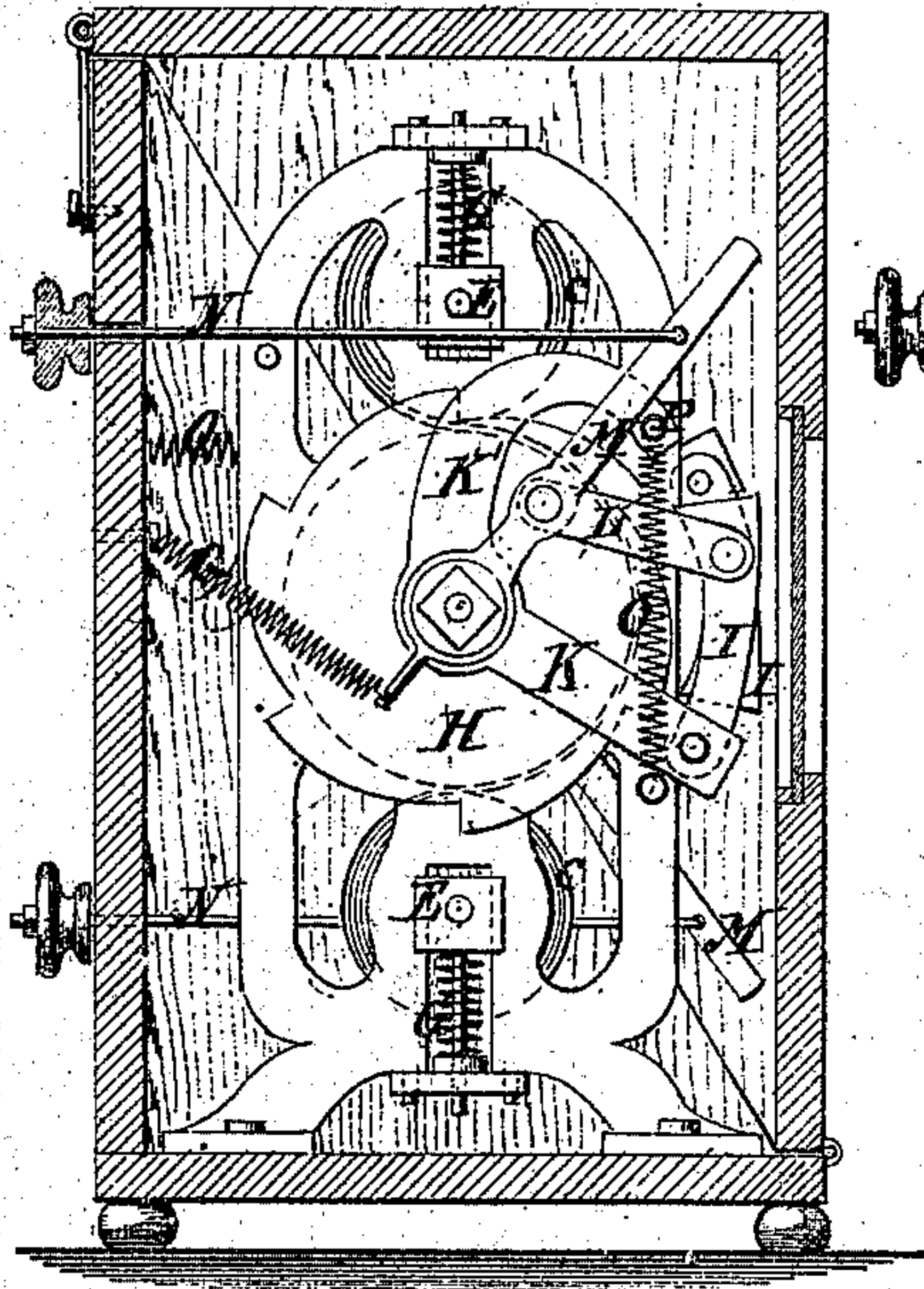


Fig: 2.

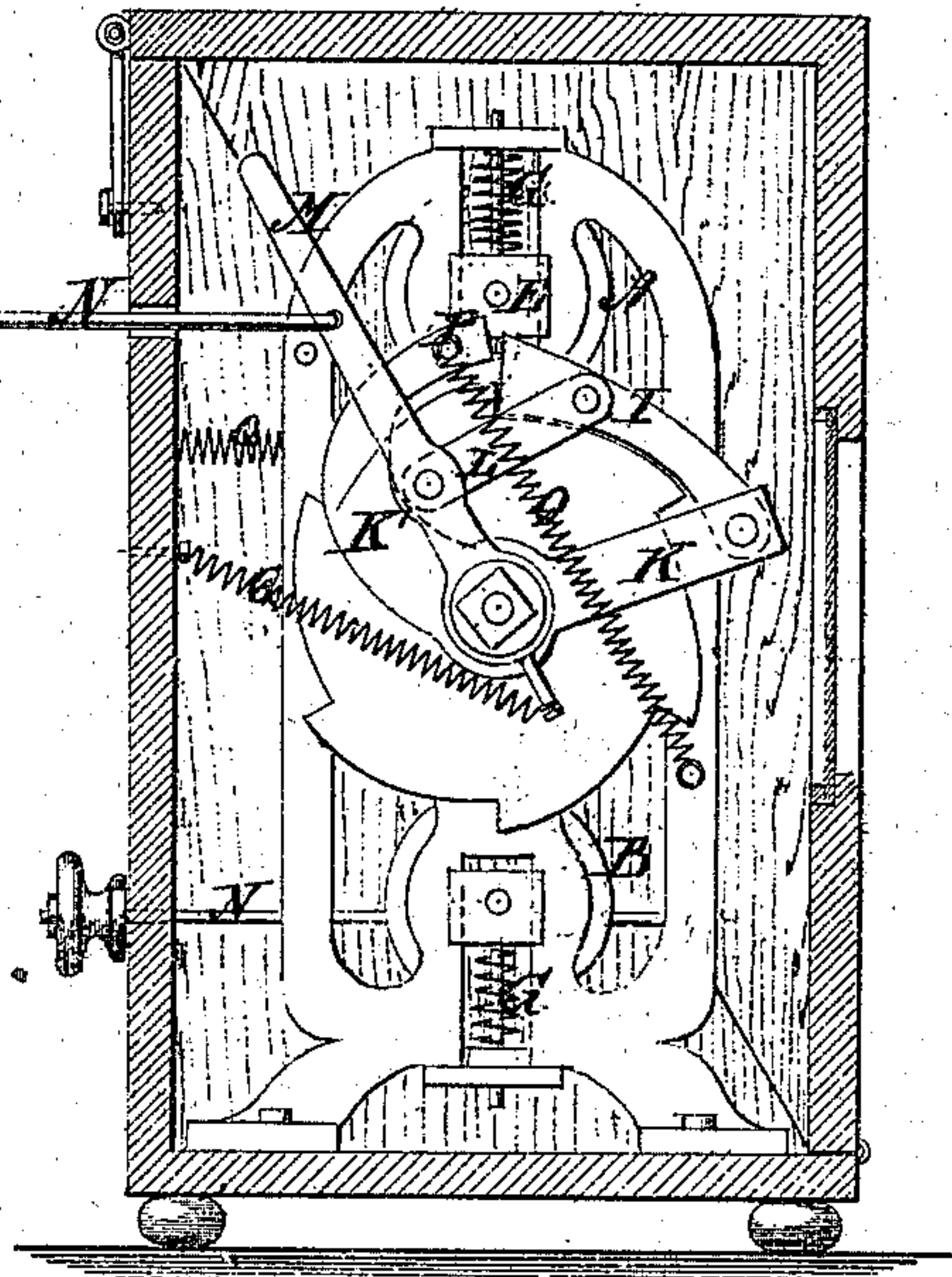
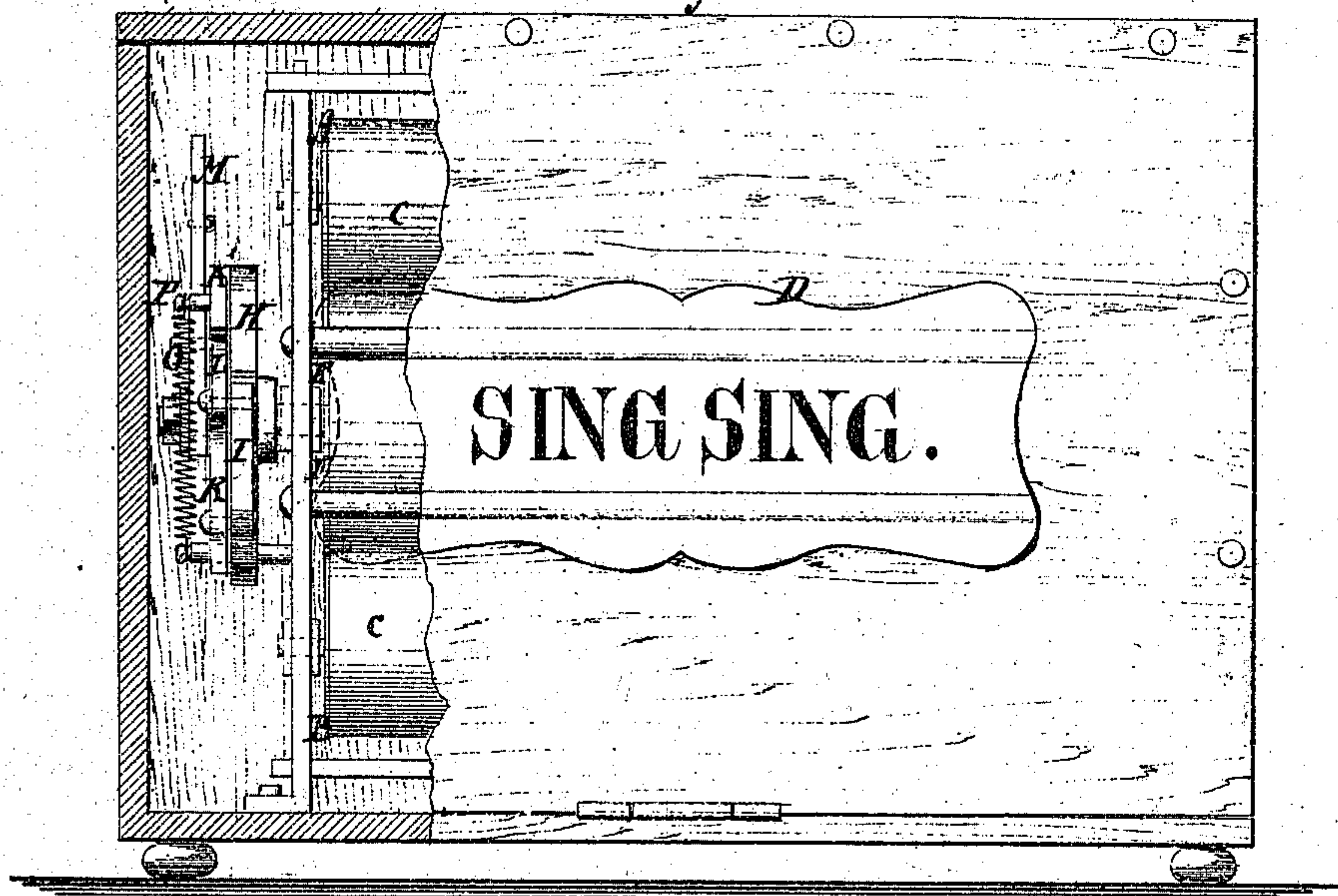


Fig: 3.



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UNITED STATES PATENT OFFICE.

JULIUS P. PFAU, OF LANSINGBURG, NEW YORK.

IMPROVEMENT IN RAILWAY-STATION INDICATOR.

Specification forming part of Letters Patent No. **103,237**, dated May 17, 1870.

To all whom it may concern:

Be it known that I, JULIUS P. PFAU, of Lansingburg, in the county of Rensselaer and State of New York, have invented a new and Improved Railway-Station Indicator; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to improvements in railway-station indicators; and it consists in the application between the rollers on which the canvas is wound of a tension-roller placed in front of the opening in the case, for the observation of the names of stations, and the arrangement of the upper and lower rollers to be forced against it by springs or other yielding mechanism, whereby they will be moved by it, and the canvas stretched over the front side of the said middle roller and in front of the opening, and maintained in a taut condition, whether it be wound more on one roller than the other or not.

The invention also consists in a ratchet-and-pawl mechanism of peculiar construction, applied to each end of the said middle roller, for moving it in opposite directions as the cars are reversed at the ends of the routes, the said ratchet-and-pawl mechanism being so constructed that after each movement the pawl is raised out of contact with the wheel, leaving it free to be moved backward, if required.

Figure 1 is a transverse sectional elevation of my improved station-indicator, showing the pawl mechanism when in the normal position. Fig. 2 is a similar section, showing the same at the end of a movement for rotating the shaft; and Fig. 3 is a front elevation, partly sectioned.

A is the upper and B the lower roller, to which the canvas C is connected and wound on and off for moving it past the opening D in the case. These rollers are mounted in bearings E, arranged for sliding to and from the middle roller, F, and the said boxes have springs G, for pressing them against the said middle roller. The latter is mounted in fixed bearings, and the canvas is wound from the

rear sides of the upper and lower rollers over the front of the middle one, passing between the latter and the other two, and so that a movement of the middle one will impart motion to the others, winding the canvas off from one and onto the others, giving the same surface speed to each that it has, no matter how the size may vary, thereby always keeping the canvas under the same tension, and preventing any variation in the relation of the names on the canvas to the opening through which they are to be observed.

The middle roller has a ratchet-disk, H, on each end, the notches of which are the required distance apart to cause the necessary movement of the canvas by the movement of the disks the distance of one notch; and each disk has a pawl, I, jointed at the rear end to a radial arm, K, journaled loosely on the axis of the roller and connected to the curved arm K'. The said pawls are connected at the other end by links L to the pawl-levers M, which are actuated by the pull rods or cords N. The end of the curved arm K' has a retracting-spring, O, attached by a stud, P, against which the pawl-lever M bears when retracted by its spring Q, so that both springs act to retract the pawl.

It will be seen that the pawls I are thrown up by the action of the links L and pawl-levers at each return movement, so as to free the wheels H and allow them to be moved backward, if required.

The pawl-and-ratchet mechanisms for each end are reversed in relation to each other, so that one will move the canvas one way and the other the other way.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

The adjustable spring-pressed rollers A B, combined with a middle actuating-roller, F, the three rollers being relatively arranged and operated in an indicating apparatus, so as to dispense with all springs or additional rolls.

JULIUS P. PFAU.

Witnesses:

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