(No Model.)

C. O. BALL.

STATION INDICATOR.

No. 278,489. Patented May 29, 1883.

Fig. 1.

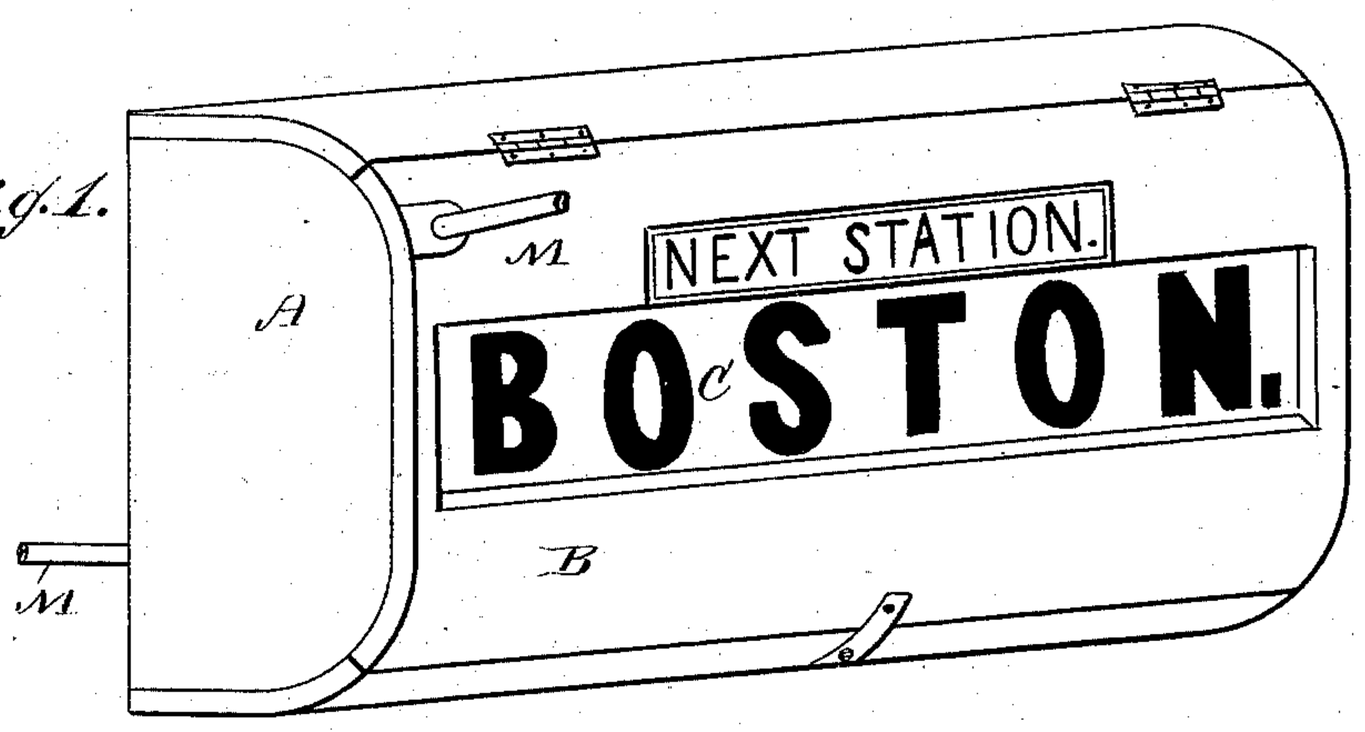


Fig. 2.

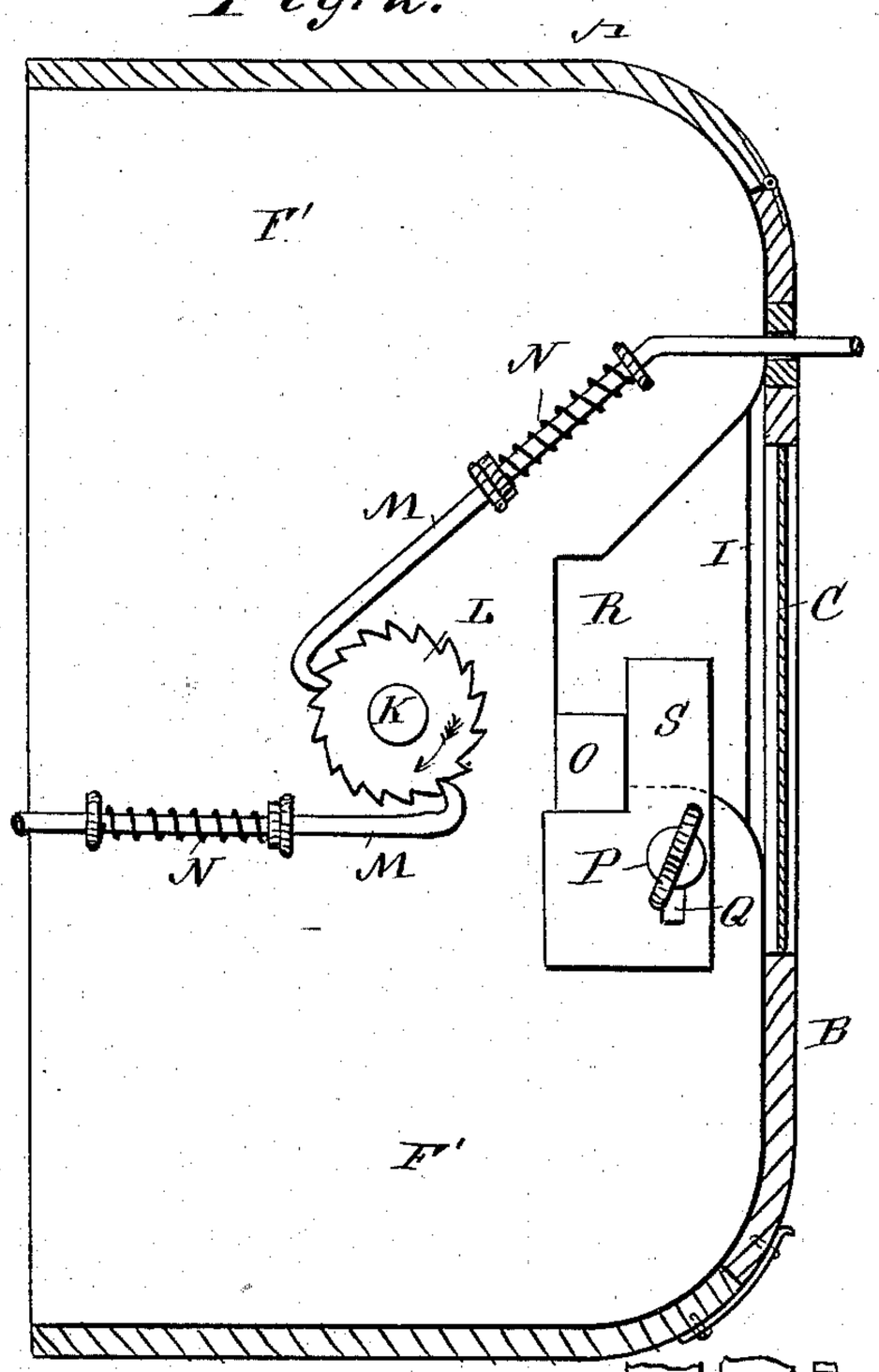


Fig. 3.

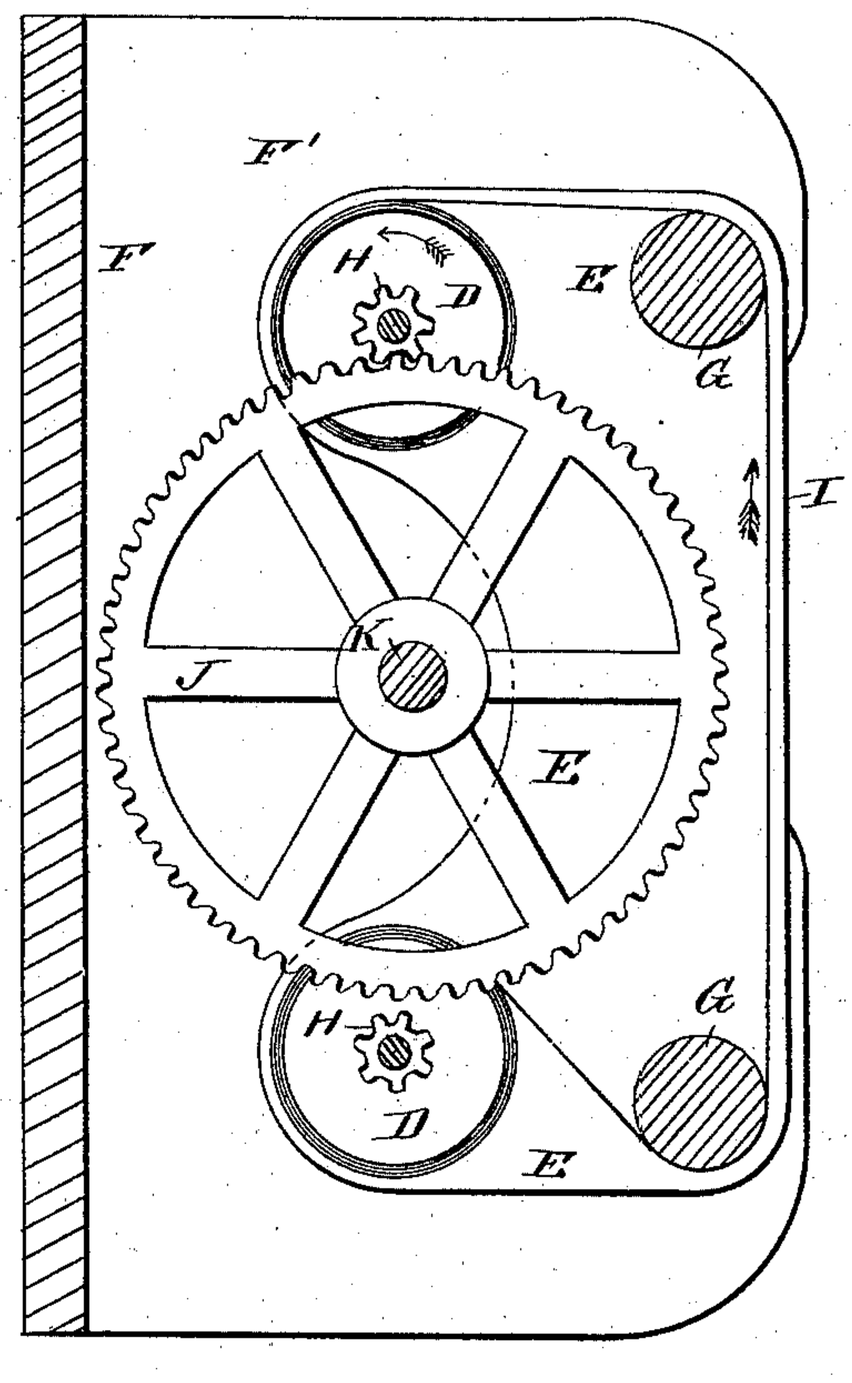
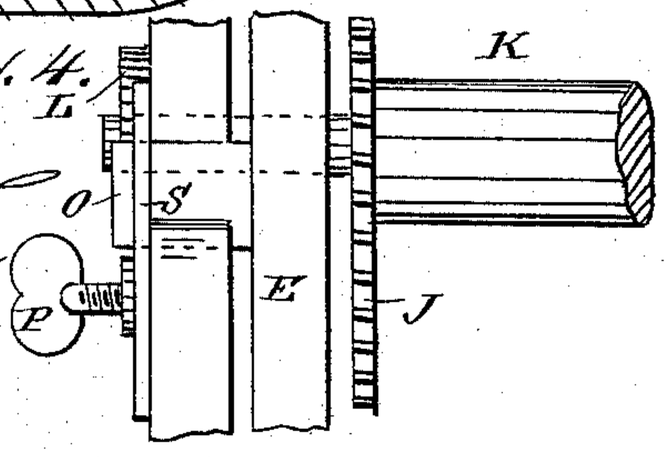


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

CHARLES O. BALL, OF LOWELL, MASSACHUSETTS.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 278,489, dated May 29, 1883.

Application filed December 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, CHARLES O. BALL, of Lowell, in the county of Middlesex and State of Massachusetts, have invented a new and Improved Station-Indicator, of which the following is a full, clear, and exact description.

The object of the invention is to make certain improvements in a station-indicator, as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of my improved station-indicator. Fig. 2 is a cross-sectional-elevation of the same, showing the casing and the mechanism-frame. Fig. 3 is a cross-sectional elevation of the same through the mechanism in frame. Fig. 4 is a detail longitudinal view of part of the front of the mechanism-frame.

A casing or box, A, which contains the mechanism of the station-indicator, is provided in its front with a hinged or sliding door, B, provided with a glass plate, C, through which the names of the stations can be seen. The names of the stations are painted, printed, or otherwise produced on a band or belt, I, which has its ends secured to rollers D, journaled in two end boards E, which are held in the end boards F′ of a frame, F, fitting within the casing or box A. The band I passes over rollers G at the top and bottom front corners of the boards E. Each roller D is provided with a pinion, H, adapted to engage with a cog-wheel, J, mounted on a shaft, K, journaled in the frame F, and provided on the outer surface of one end board F′ with a ratchet-wheel, L. Two hook-pawls, M, held to slide on the end board of the frame F, engage with the teeth of the ratchet-wheel L at diametrically-opposite points. The said hook-pawls are pressed toward the edge of the ratchet-wheel by springs N surrounding them. The hook-pawls extend through the box or casing A, and are connected with cords reaching to the ends of the cars. The end boards E are provided on the outer surfaces with pintles O, which rest on angular plates S, held on the outer surfaces of the end boards F′ by thumb-screws P, passing through vertical slots Q in the said plates. The end boards F′ are provided with recesses R, within which the pintles O are contained. The rollers D are such a distance apart that when the cog-wheel J engages with the pinion H of one roller D it will be disengaged from the pinion H on the other roller D.

The operation is as follows: If the boards E are raised and are locked in the raised position by means of the thumb-screw P, the cog-wheel J will be engaged with the pinion H of the upper roller D. Every time the rope connected with one of the hook-pawls M is pulled the ratchet-wheel L will be rotated the distance of one or more teeth in the direction of its arrow, and the wheel J is rotated in the same direction, whereby the upper roller D will be rotated in the direction of its arrow. Thereby a part of the band I is wound from the bottom roller D on the upper roller D and another name will appear behind the glass pane C. At the end of the line or section the end boards E are lowered, so that the cog-wheel J engages with the pinion H of the bottom roller D, whereby the band I will be wound on the bottom roller D by pulling on the rope connected with the hook-pawls M. The rollers D are lowered if the train runs back over the section; but if it continues in the same direction over a new section another set of rollers D and corresponding band containing the names of the stations on the new section are placed in the casing A.

The device can be operated by a spring or springs instead of the pawl-and-ratchet mechanism shown; and notice of a change of cars and any other information for the traveling public can be printed or produced on the band I.

I am aware that there is nothing new in the case, the arrangement of the rolls, or the mechanism by which the band or belt is operated; but

What I do claim as new and of my invention is—

1. In a station-indicator, the combination, with the drive-shaft K, of the ratchet-wheel L, made fast thereon, and the spring hook-pawls M M, engaging said wheel at diametrically-opposite points, the shanks of said pawls being extended through the casing, whereby the mech-

anism may be operated from the outside, as described.

2. In a station-indicator, the combination, with the end boards F′, having recesses R, of the movable end boards or roller-bearings E, provided with the pintles O, the angular plates S, having vertical slots Q, and the thumb-screws P, whereby the roller-bearings E may be locked in two different positions, as and for the purpose specified.

CHARLES O. BALL.

Witnesses:
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