

(No Model.)

2 Sheets—Sheet 1.

M. MANUEL.
STATION INDICATOR.

No. 498,280.

Patented May 30, 1893.

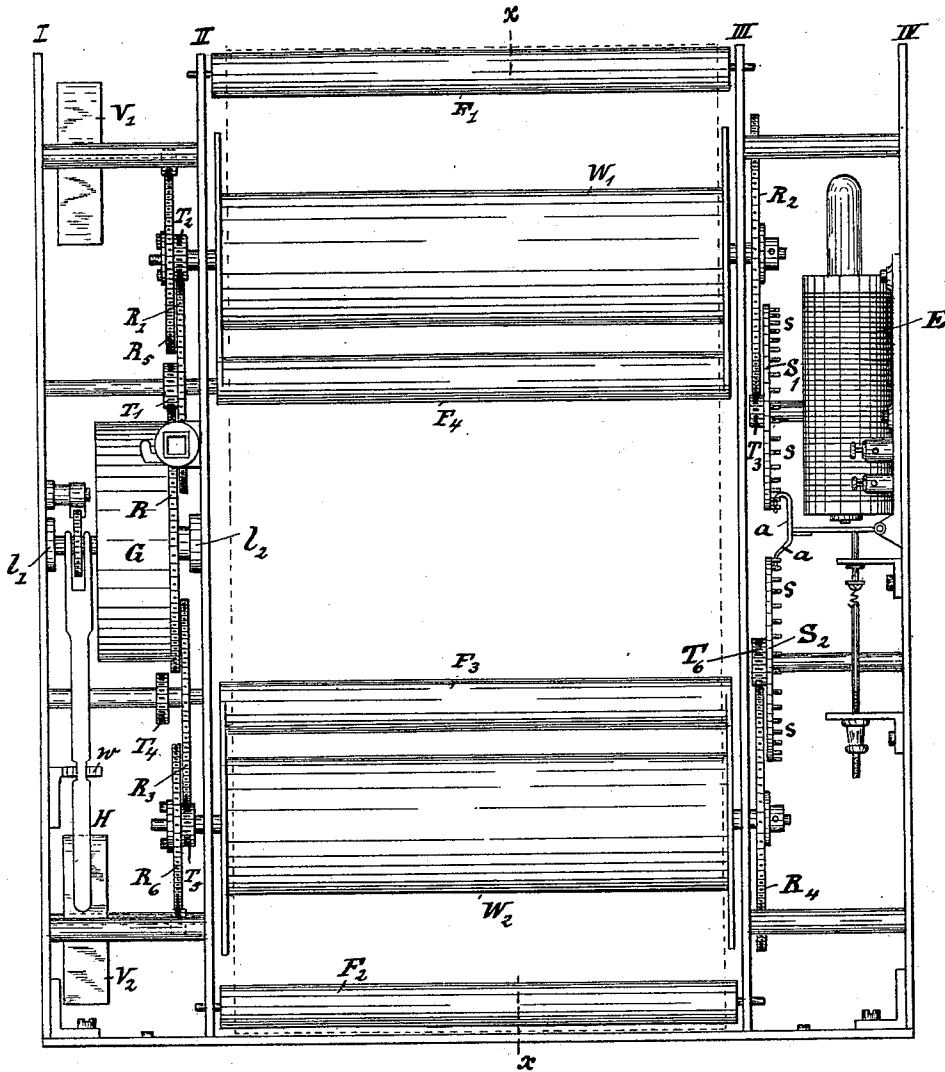


Fig. 1.

WITNESSES: _____ INVENTOR :

Wm. J. Bell
D. M. Robertson.

Max Manuel

BY
Partner & Co
ATTORNEYS.

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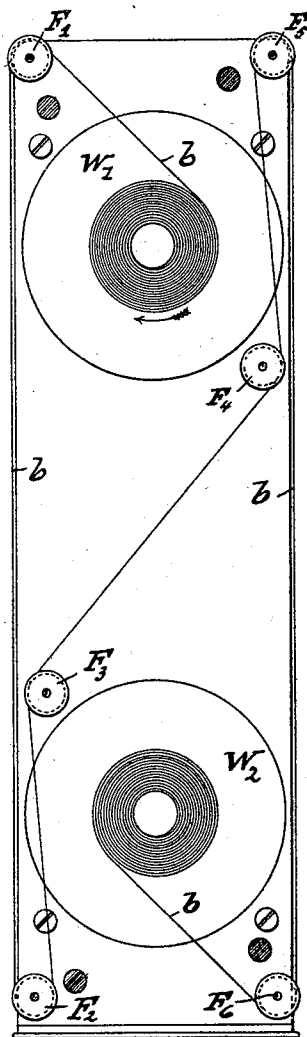


Fig. 2.

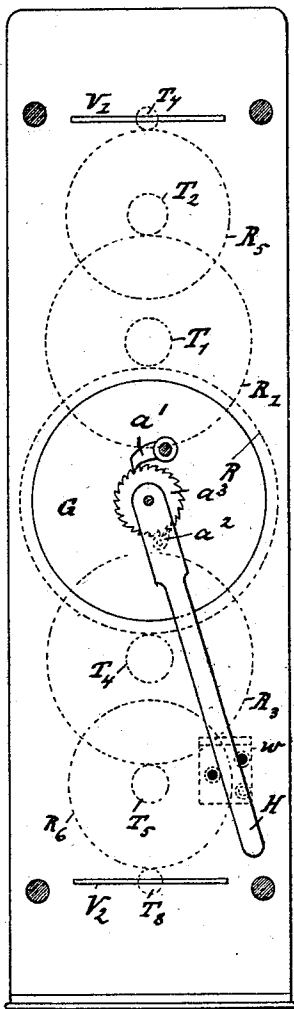


Fig. 3.

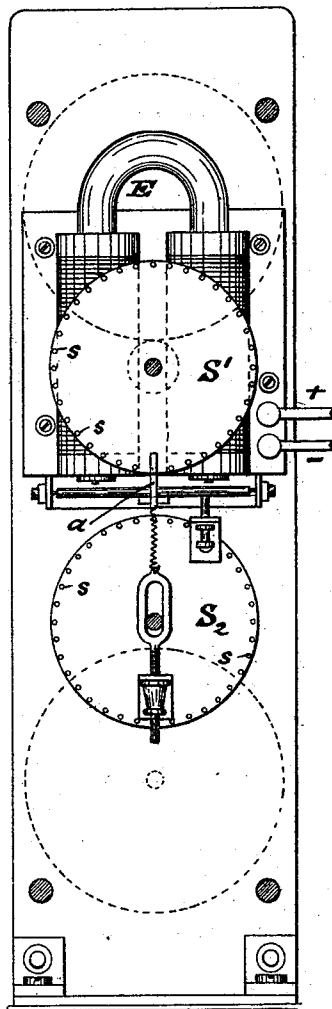


Fig. 4.

WITNESSES:

Wm. D. Bell.
A. W. Robertson

INVENTOR:

Max Manuel

BY

Partner & Co
ATTORNEYS

UNITED STATES PATENT OFFICE.

MAX MANUEL, OF VIENNA, AUSTRIA-HUNGARY.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 498,280, dated May 30, 1893.

Application filed September 5, 1892. Serial No. 445,100. (No model.)

To all whom it may concern:

Be it known that I, MAX MANUEL, a subject of the Emperor of Austria-Hungary, residing at Vienna, Austria-Hungary, have invented a new and useful Informer of Stations and Advertisements, (for which I have obtained patent in no country,) of which the following is a specification.

The object of my present invention is to provide a station-indicator, to be placed in the cars of a rail-road train, simple and durable in construction, and reliable in operation.

The invention consists in the improved station-indicator, its operating and controlling mechanism, and the arrangement and combination of the various parts thereof, substantially as will be hereinafter more fully described and finally embodied in the clauses of the claim.

Similar letters indicate corresponding parts in each of the several figures.

Figure 1 is a front elevation of my improved apparatus, with the cover or inclosing box removed. Fig. 2 is a sectional view on line *a* of Fig. 1. Figs. 3 and 4 are inside views of the Plates I and IV respectively, also illustrating those parts, which are arranged on said plates.

In said drawings, I, II, III, and IV, represent the frames, secured in a box in any desired manner. Within the frames II and III, are arranged the take-up rollers W' and W^2 , and the guide rollers F' , F^2 , F^3 and F^4 , F^5 , F^6 . On the said take-up rollers is wound a paper strip *b*, on which the names of the different stations and also any desired advertisements are printed. The shafts of the rollers W' and W^2 are operated and controlled by the mechanism, arranged between the frames I and II, and the frames III and IV respectively, in such a manner, that only one of said rollers is operated at one time. For said purpose, the main or driving spring *G* operates a gear wheel *R*, and through intermediate pinion T' and gear wheel R' , the pinion T^2 , secured to the shaft of the upper take-up roller W' ; but, when the said driving spring with its gear wheel *R* is shifted, the motion is transmitted, through intermediate pinion T^4 and gear wheel R^3 , to the pinion T^5 on the

shaft of the lower roller W^2 , as will be hereinafter more fully described.

The speed of rollers W' and W^2 is regulated by gear wheels R^5 and R^6 respectively, controlled by fans V' and V^2 , as clearly shown in Figs. 1 and 3 of the drawings.

To regulate and control the time or number of revolutions of the take-up rollers, their respective shafts are also provided with gear wheels R^2 and R^4 , meshing into pinions T^3 and T^6 , the latter being secured to shafts, carrying the escapement wheels S' and S^2 respectively. Each of said wheels is provided with a series of pins *s*, adapted to be engaged by the extending portions of armature *a*, operated by electro-magnet *E*.

The driving spring *G* is wound up by means of lever *H*, operating by pawls a' and a^2 , the ratchet a^3 , which latter is secured to the spring carrying shaft. By means of said lever *H*, the said spring carrying shaft with its gear wheel *R*, can be moved laterally in its bearings l' and l^2 , whereby the gear wheel *R* disengages the pinion T' and engages the pinion T^4 , thus disconnecting and connecting the driving mechanism of the upper and lower take-up rollers simultaneously.

One or more of the above described station indicators are placed in each car, and the wires, connecting the electro-magnets of said indicators, are carried to the engine or baggage car, from where the said indicators are simultaneously operated.

In operation, when the train is started, the circuit of the electro-magnet *E* is closed, whereby the armature *a* is attracted by said magnet. The extending portion of said armature disengages the pins *s* of the (upper) escapement wheel S' , whereby the roller W' is released and rotated by the spring motor driving mechanism, in the direction, indicated by the arrow in Fig. 2. Said rotation is interrupted (by breaking the electric circuit), as soon as the name of the next station appears on the face of the indicator. Whenever the station thus indicated is reached by the train, the above described operation is repeated, thus indicating the name of the next following station. When the train is about to return to its starting point, the lever *H* is shifted, so that the lower roller W^2

is put in direct connection with the driving mechanism, and the operation is then the same as above described.

I do not intend to limit myself to the construction shown and described, as various alterations can be made, without changing the scope of my invention, but

What I claim as new, and desire to secure by Letters Patent, is—

10 1. The combination in a station indicator, of the take up rollers, with a spring drum, a gear wheel controlled by said spring drum, pinions adapted to mesh with said spring drum alternately, intermediate gear wheels
15 keyed to the shafts of said pinions and with pinions meshing with said intermediate gear wheels and keyed respectively to the shafts of the take up rollers and with mechanism adapted to both wind said spring drum and
20 to move it laterally with its gear wheel alternately into engagement with the mechanism for alternately revolving the take up rollers, substantially as described.

2. The combination in a station indicator
25 of the take up rollers W' , W^2 , with a spring drum G , gear wheel R integral therewith, pinions T' , T^4 adapted, alternately, to mesh with said gear wheel R , gear wheels R' , R^3 keyed to the shafts of said pinions T' , T^4 , pinions
30 T^2 , T^5 adapted to mesh with said gear wheels R' , R^3 and keyed respectively to the shafts of the take up rollers W' , W^2 and the wing escapements V' , V^2 adapted to control the revolution of the shafts carrying the pinions T^2 , T^5 and
35 take up rollers W' , W^2 , and with a lever H adapted to both wind said drum G and to move it and the gear wheel R alternately into engagement with the pinions T' , T^4 whereby said take up rollers W' , W^2 are alternately re-
40 volved, substantially as described.

3. The combination in a station indicator, of the take up rollers W' , W^2 , and means for alternately revolving said rollers, with the gear wheels R^2 , R^4 , keyed respectively to the
45 shafts of said rollers W' , W^2 , pinions T^3 , T^6 , meshing with said gear wheels R^2 , R^4 and es-

capements S' , S^2 carried respectively by the shafts of pinions T^3 , T^6 , substantially as described.

4. The combination in a station indicator, 50 of the take-up rollers W' , W^2 and means substantially as described for alternately revolving said rollers, with the gear wheels R^2 , R^4 keyed to the respective shafts of said rollers, pinions T^3 , T^6 , meshing with said gear wheels 55 R^2 , R^4 , and the escapements S' , S^2 carried by the shafts of said pinions T^3 , T^6 , and with an electro-magnet E , and its armature a , said armature being adapted to alternately release said escapements S' , S^2 , substantially as de- 60 scribed.

5. The combination in a station indicator of the take up rollers W' , W^2 , spring drum G carrying the gear wheel R , pinions T' , T^4 , alternately meshing with said gear wheel, in- 65 termediate gear wheels R' , R^3 carried by the shafts of pinions T' , T^4 , pinions T^2 , T^5 meshing with the gear wheels R' , R^3 and keyed to the shafts of said rollers W' , W^2 , escapements V' , V^2 adapted to control the revolution of the 70 shafts of said rollers W' , W^2 and lever H adapted to both wind said drum G and to throw the gear wheel R alternately into engagement with the pinions T' , T^4 whereby said rollers W' , W^2 , are alternately revolved, and with 75 the gear wheels R^2 , R^4 , keyed to the shafts of said rollers W' , W^2 , pinions T^3 , T^6 , meshing with said gear wheels R^2 , R^4 , and respectively controlled by the escapements S' , S^2 , and with an electro-magnet E and its armature a , said 80 armature being adapted when actuated by said magnet to alternately release the escapements S' , S^2 and thereby control the revolution of the take up rollers, substantially as 85 described.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

MAX MANUEL.

Witnesses:

MORIZ GELBHAUS,
A. SCHLESSING.