

(No Model.)

G. M. GUILD.  
Railway Station Indicator.

No. 238,893.

Patented March 15, 1881.

Fig. 1.

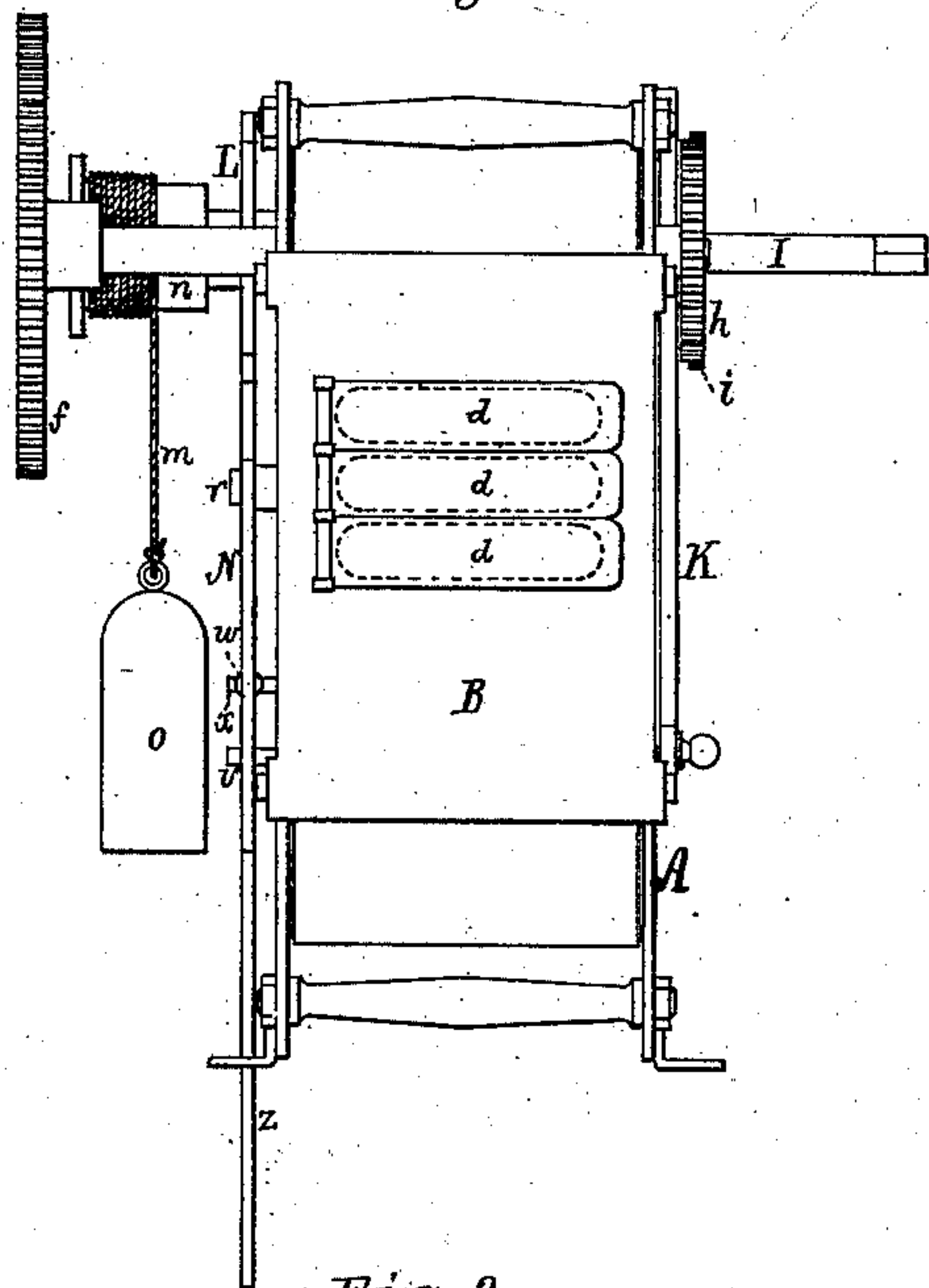


Fig. 2.

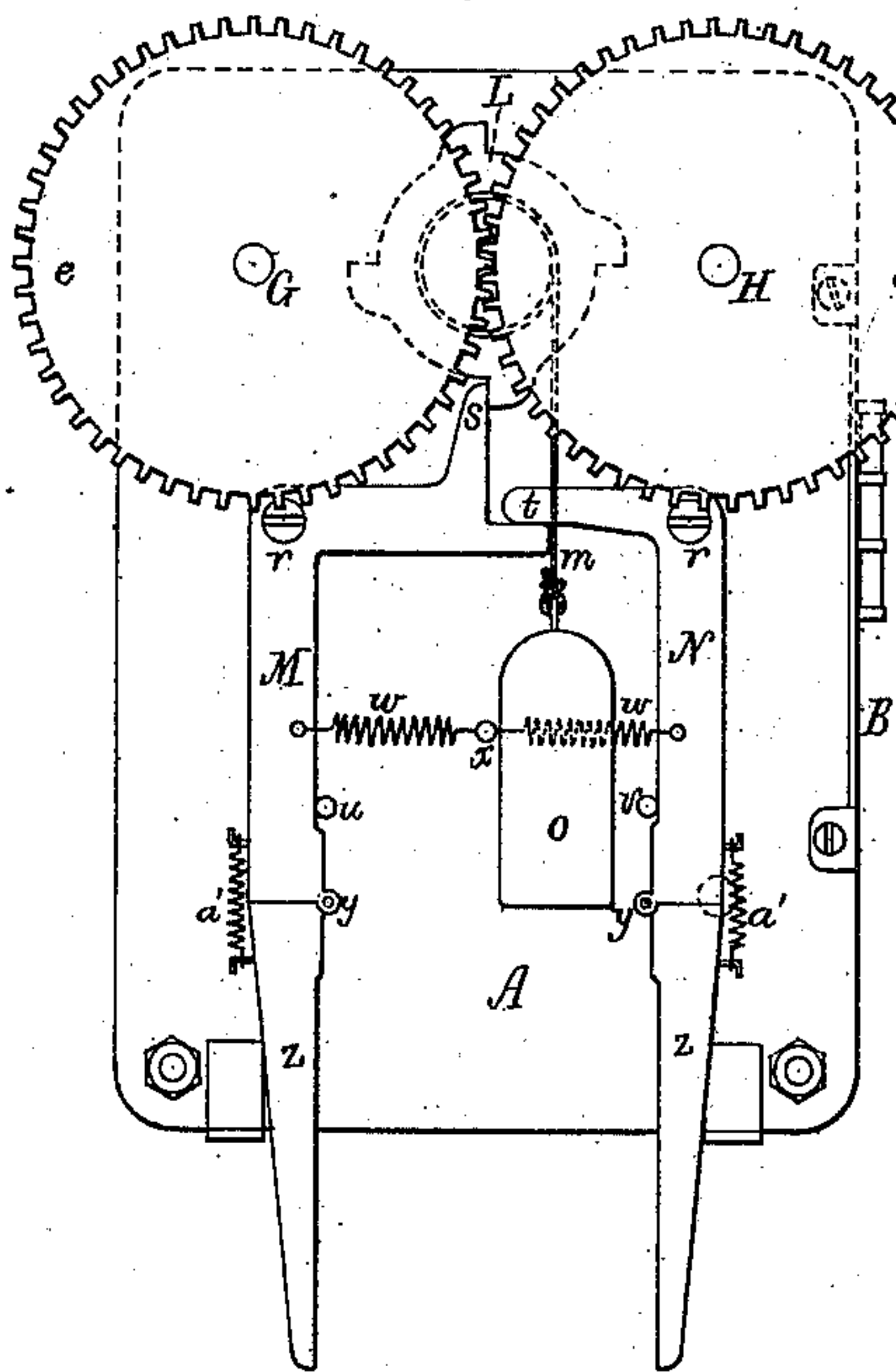


Fig. 4.

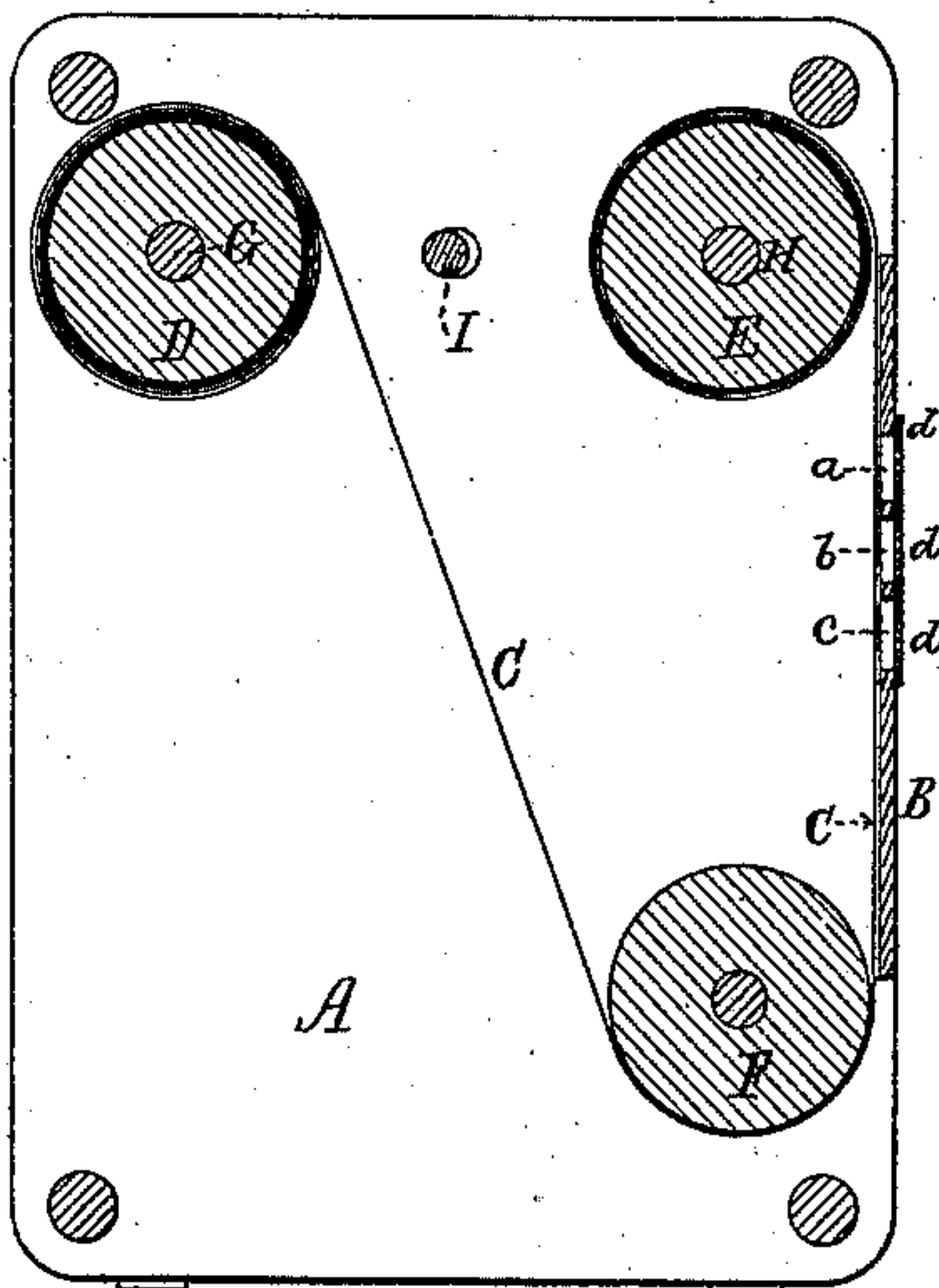


Fig. 3.

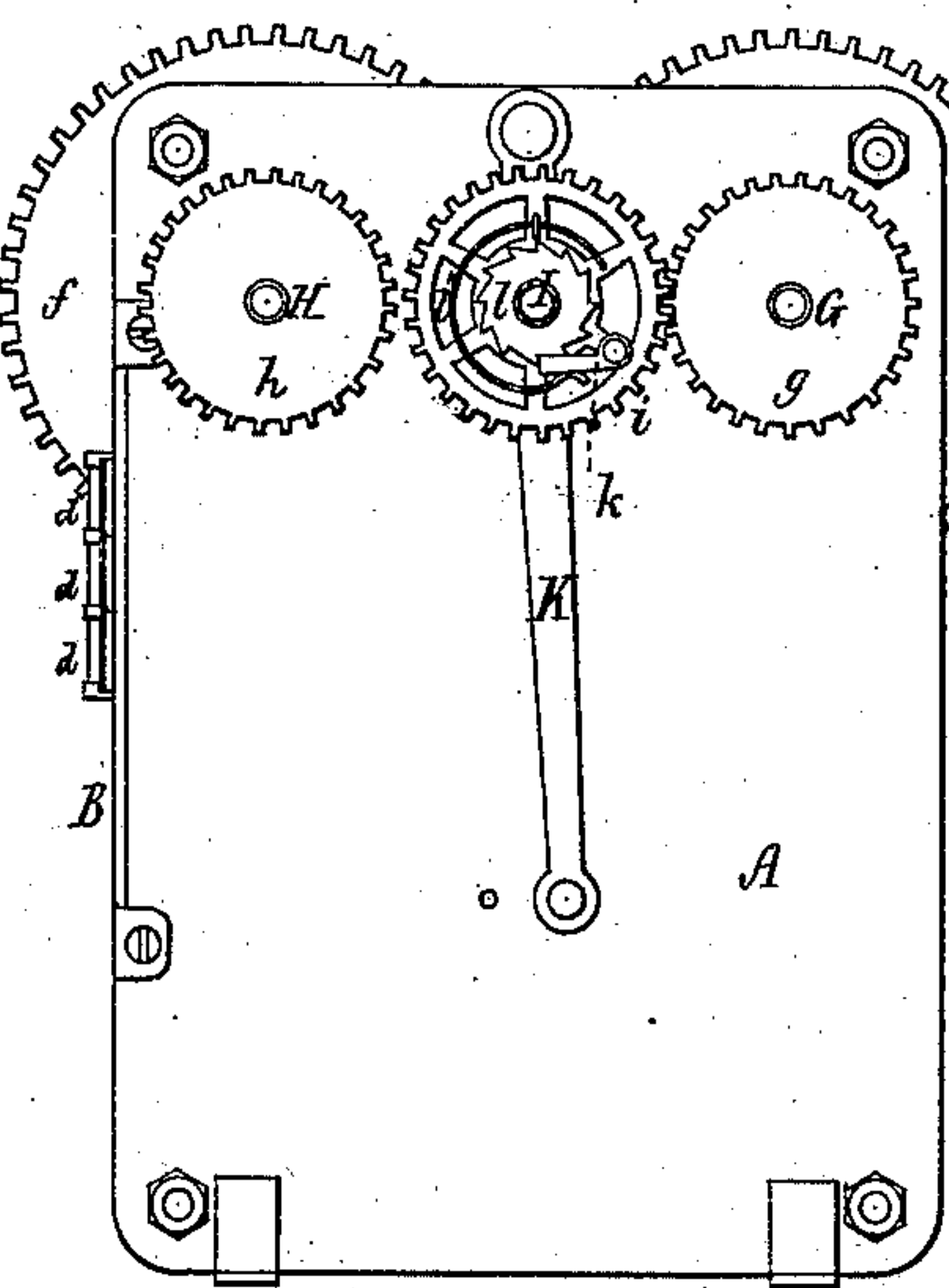
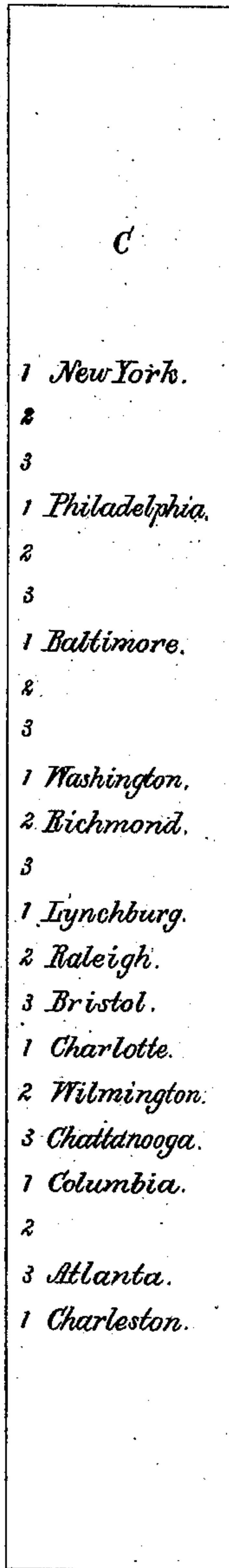


Fig. 5.



Witnesses  
S. N. Piper  
Wm. W. Hunt

Inventor.  
George M. Guild.  
by attorney  
R. H. Eddy.



# UNITED STATES PATENT OFFICE.

GEORGE M. GUILD, OF BOSTON, MASSACHUSETTS.

## RAILWAY-STATION INDICATOR.

SPECIFICATION forming part of Letters Patent No. 238,893, dated March 15, 1881.

Application filed July 12, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE M. GUILD, of Boston, of the county of Suffolk and State of Massachusetts, have invented a new and useful Improvement in Railway-Station Indicators; and I do hereby declare the same to be described in the following specification, and represented in the accompanying drawings, of which—

Figure 1 is a front view, Figs. 2 and 3 side elevations, and Fig. 4 a longitudinal section, of an indicator having my invention. Fig. 5 is a view of its station-name band, showing the mode of arranging on it the names of stations of the main line and two branches of a railway.

The object of the invention is to indicate successively the names, not only of the stations of a main or trunk line of a railway, but those of either of its branches upon which a car or train may pass from or to the main line.

The apparatus, as represented in the drawings, is designed to show, on opening the upper door of the set of three openings of the front plate, the name of any station of the main line to which the car may be directly approaching. By closing such door and opening the next one below on the car or train passing from the main line upon one branch track the names of the stations of such branch track will be made to successively appear at the proper times at the opening of such door. So, upon the car passing upon another branch line, the stations thereof will be properly indicated in their order at the lowest opening of the three, its door being supposed then to be open and the doors above to be closed. On making a return-trip, whether such be wholly or partially on the main track, the names of the stations will be duly indicated in the order required.

In the drawings, A denotes the frame for supporting the operative parts, there being on the front of such frame a plate, B, having in it two or more horizontal slots or openings, three of them (marked *a b c*) being represented. Each of such openings is provided with a separate door, *d*, for closing it. In rear of the said plate is the station-name band C, which is supported by three rolls or cylinders, D E F, arranged in the frame A in manner as rep-

resented. The two upper rolls are carried by shafts G H, that are geared together by the gears *ef*. The ends of the name-band are fixed to the two upper rolls, and such band passes from one of such rolls down under the lowest roll, and thence up to the other roll, and winds around both upper rolls, or unwinds from one and winds upon the other when the two shafts are revolving.

Gears *g h* are fixed to the shafts G H, and between them is a gear, *i*, that revolves freely on an intermediate shaft, I, and is provided with a pawl, *k*, to engage with a ratchet-wheel, *l*, fixed on the shaft, the said pawl being provided with a spring, *l'*, to keep it up to the ratchet-wheel. The pawl-spring and ratchet-wheel are to allow of the shaft being revolved to effect the winding up of a line or rope, *m*, attached to a barrel or cylinder, *n*, and having at its lower end a weight, *o*. The barrel *n* is fixed on the shaft I, so as to revolve therewith. This shaft extends through and takes a bearing in a switch-lever, K, fulcrumed at its upper part to the frame A, and movable so as to cause the gear *i* to engage with either of the gears *g h*, such gear *i*, while in engagement with either of the gears *g h*, being out of engagement with the other of such gears. At its lower part the lever may have a stud to enter one of two recesses made in the frame, such serving to hold the lever in either of its two extreme positions. The holes that are made through the sides of the frame for the reception of the shaft I should be large enough to allow of the necessary lateral play of such shaft, caused by moving the gear I into engagement with either of the gears *g h*.

An escapement-wheel, L, is fixed on the shaft I, and is to operate with two bent or right-angular levers, M N, having fulcrum, arranged as represented. From the lever M a tooth, *s*, extends up to the wheel L, and the upper arm of the lever N extends over and upon that of the lever M in manner as shown at *t*. The lower or vertical arms of the levers M N are drawn against stationary studs *u v* by springs *w w* extending from an intermediate stationary stud, *x*. Furthermore, there projects downward from each of such arms, and hinged to it in manner as shown at *y*, a tripper, *z*. A helical spring, *a'*, arranged as shown,



connects the outer edge of each tripper with that of the lever-arm directly over it.

To operate the apparatus there is to project upward from the road-bed, near each station, a post or projection, which should rise high enough for the lower part of each tripper to meet and pass in contact with it and by it on the departure of the car containing the apparatus from the said station. In so doing the advanced tripper will pass over the obstruction without causing any movement of the lever of such tripper; but in passing against and by the obstruction the rearmost tripper will move its lever so as to cause the tooth *s* to move away from the escapement-wheel *L* sufficiently to allow it to be revolved by the weight and line acting on the barrel of the shaft *I*. The escapement-wheel will make a partial revolution until a tooth of it may bring up against the tooth *s*. This partial revolution of the escapement-wheel will cause the station-name band to be moved the necessary distance to exhibit at the proper opening, *a*, *b*, or *c*, the name of the station next to be reached by the car or train. Now, if we suppose the stations of the main or trunk line to be as follows—viz., New York, Philadelphia, Baltimore, Washington, Lynchburg, Charlotte, Columbia, and Charleston, and that at Washington there is a branch railway to run through Richmond, Raleigh, and Wilmington, and at Lynchburg there is another branch road to run through Bristol, Chattanooga, and Atlanta, the names of the stations of the said main and branch lines would be marked or printed on the band in the order as shown in Fig. 5. While the car or train may be running on the main line the uppermost of the three doors is to be open and the others closed. The names of the stations of that line will, as the train may progress, appear at the door opening in the required order when the train may be moving in either direction on the railway. On the train passing from the main line to and upon the Richmond and Wilmington branch the conductor should close the uppermost door and open that next below. The names of the branch stations will appear at the opening at the proper periods and order. So, on the train

passing from the main line to and upon the Lynchburg and Atlanta branch, the conductor should close the uppermost and middle doors and open the lowermost one. In this case the names of the stations of the branch will appear at the proper times and order.

From the above it will be seen that the apparatus is constructed to indicate the names of the stations of both the main line and its two branches.

Preparatory to the train being put on the return trip the conductor is to wind up the cord on the barrel and move the switch-lever *K*, so as to cause the name-band to move on its rolls the opposite way to what it was previously moved.

The number of slots in the plate should correspond to one added to the number of branches, the names of the stations of the main line, as well as those of each branch, being arranged on the name-band, so as to cause them to be successively brought to view at the slot or opening disclosed to show them.

I claim as my invention as follows, viz:

1. The combination of the plate *B*, having two or more openings, *a b c*, and a cover or door to each, with the movable station-name band *C*, having the names of the main and branch tracks marked on it, essentially as described, and provided with mechanism for supporting it, and intermittently moving it relatively to such openings, substantially as and for the purposes as explained.

2. The combination for supporting and intermittently moving the station-name band *C* in either direction, such consisting of the supporting-rolls *D E F*, the shafts *G H I*, gears *e f*, escapement-wheel *L*, barrel *n*, cord *m*, and weight *o*, escapement-levers *M N*, tooth *s*, trippers *z z*, stops *u v*, and springs *w w a' a'*, the gears *g h*, ratchet-wheel *l*, pawl *k*, spring *l'*, and lever *K*, all arranged and adapted substantially in manner and to operate as set forth.

GEORGE M. GUILD.

Witnesses:

R. H. EDDY,  
S. N. PIPER.