

J. & A. T. HARPER.
Station-Indicators.

No. 153,949.

Patented Aug. 11, 1874.

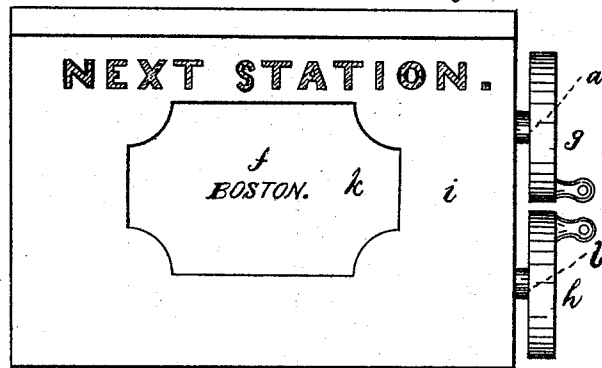


Fig. 1.

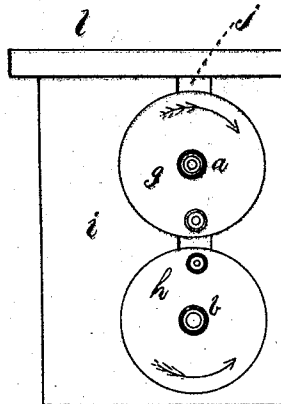


Fig. 2.

Witnesses:-
Frank H. Jordan
Charles E. Clifford

Inventors:-
John Harper
Abraham T. Harper
per Wm. Henry Clifford
att'y.

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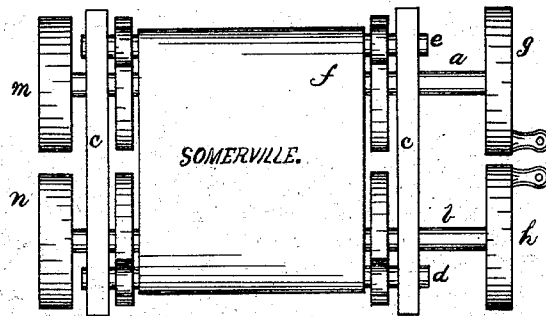


Fig. 3.

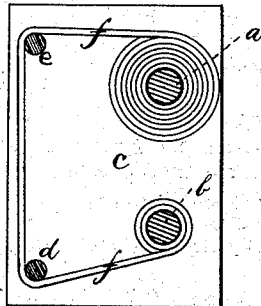


Fig. 4.

Witnesses:-
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per Wm. Henry Clifford
att'y.

UNITED STATES PATENT OFFICE.

JOHN HARPER AND ABRAHAM T. HARPER, OF PORTLAND, MAINE.

IMPROVEMENT IN STATION-INDICATORS.

Specification forming part of Letters Patent No. **153,949**, dated August 11, 1874; application filed June 16, 1874.

To all whom it may concern:

Be it known that we, JOHN HARPER and ABRAHAM T. HARPER, of Portland, in the county of Cumberland and State of Maine, have invented certain new and useful Improvements in Station-Indicators; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a front view of the box, with our improvement placed therein; Fig. 2, an end view of the same. Fig. 3 is a front elevation of the device to be placed in the box, and Fig. 4 is an end view in section of such device.

Same letters show like parts.

The object of our invention is to produce an improved station indicator or annunciator, to be used in railroad-cars for the purpose of indicating the next stopping-station.

Its construction and arrangement are simple, and may be thus described:

a b show two main shafts set in a frame, *c*. *d e* show two supplemental shafts set in the front of the frame *c*, one near the top, the other at the same distance from the bottom. To the upper main shaft *a* is attached one end of a band, *f*, which is of sufficient width and length to contain, at regular distances apart on its surface, the names of the stations between the starting and stopping points on the road. This band, provided with the names of the stations, as above specified, is wound around the upper main shaft, passed over the upper supplemental shaft *e*, down under and in front of the lower shaft *d*, and is attached to the lower main shaft *b*. *g h* show two crank-wheels, rigidly attached to the outer ends of the main shafts *a b*. *m n* show two hollow wheels on the opposite ends of the shafts *a* and *b*. These wheels are to be partially filled with sand or other suitable material.

The whole device, when thus constructed,

is placed in a box, *i*. In one end of this box is cut a slot, *j*. The ends of the shafts, to which are attached the crank-wheels, extend sufficiently beyond the end of the frame *c* to allow the said crank-wheels to rest outside the end of the box *i*, in which the device is placed, the ends of the shafts *a* and *b* passing down through the slot *j*, before described. In the front side of the box *i* is an opening, *k*, fitted with a glass. This opening is directly in front of the supplemental feed or guide rolls *d* and *e*. Over this opening, and on the front of the box *i*, are written or printed the words "next station," as shown in Fig. 1. As one of the two crank-shafts *g* or *h* is rotated in one direction, it unwinds the band *f* from the other main shaft, brings the name of each station in its turn in front of the opening *k*, and winds the band as fast as it is delivered from the other shaft onto the one which is being turned or rotated. *l* shows a cover to the box *i*.

The operation is as follows: The device is placed in the box *i*, the cover turned down, and as the car leaves the starting-station the aperture or opening *k* will be covered by that part of the band *f* which has written or printed on it the name of the next station. When the car arrives at that place a partial rotation to one of the crank-wheels *g* or *h* will bring that part of the band in front of the opening as will indicate the name of the next station, and so on until the entire distance of the road is passed.

By this arrangement the passengers in the car are always kept apprised of the name of the next station.

The box *i*, containing the device, is properly secured in a convenient place in the car.

The purpose of the hollow wheels *m n* is that the material with which they are partially filled will rest in the bottom of the cavity in said wheels and prevent their turning by jar, &c., thus always keeping a proper strain on the band *f*, and always holding it in position until it is turned by the operator.

What we claim as our invention, and desire to secure by Letters Patent, is—

The hollow wheels *m n*, partially filled with

sand or other suitable substance, for the purpose of keeping the proper strain upon the band, and for holding the same in the required position, in combination with the shafts *a* and *b*, provided with the crank-wheels *g* *h*, the shafts *d* *e*, band *f*, and frame *c*, the whole being arranged within the box *i*, having the slot *j*, opening *k*, and cover *l*, substantially as herein set forth.

In testimony that we claim the foregoing as our own, we affix our signatures in presence of two witnesses.

JOHN HARPER.
ABRAHAM T. HARPER.

Witnesses:

FRANK H. JORDAN,
EDGAR S. BROWN.