(No Model.)

S. H. HARROD & S. T. LAMB.

STATION INDICATOR.

No. 367,392. Patented Aug. 2, 1887.

Fig. 1.

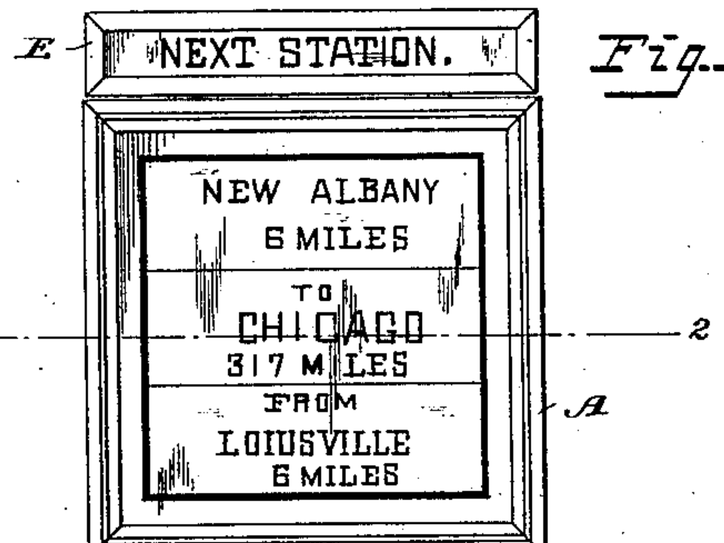


Fig. 2.

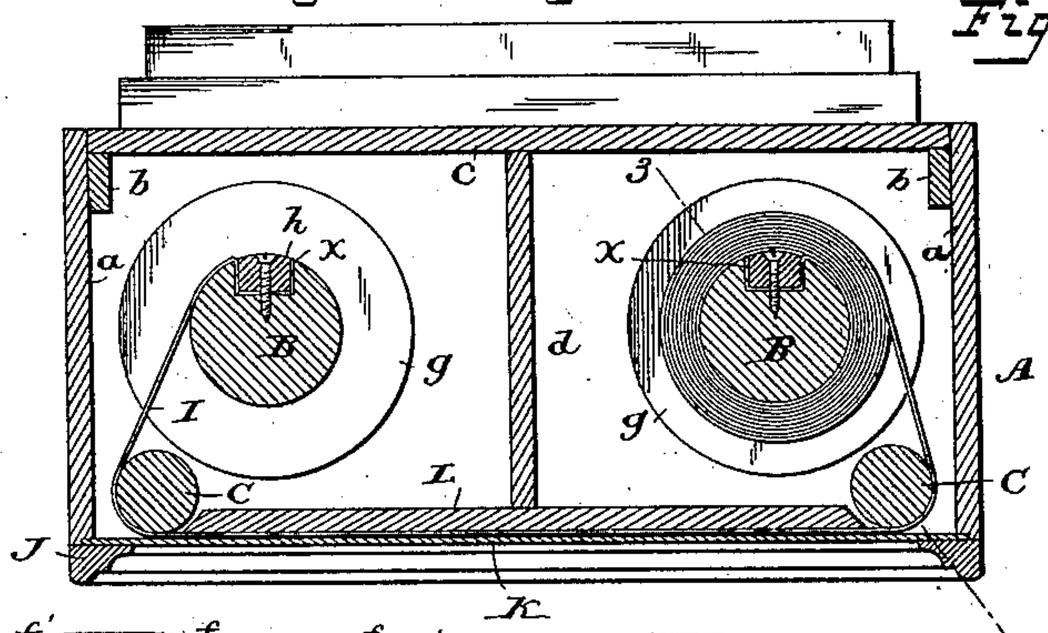


Fig. 3.

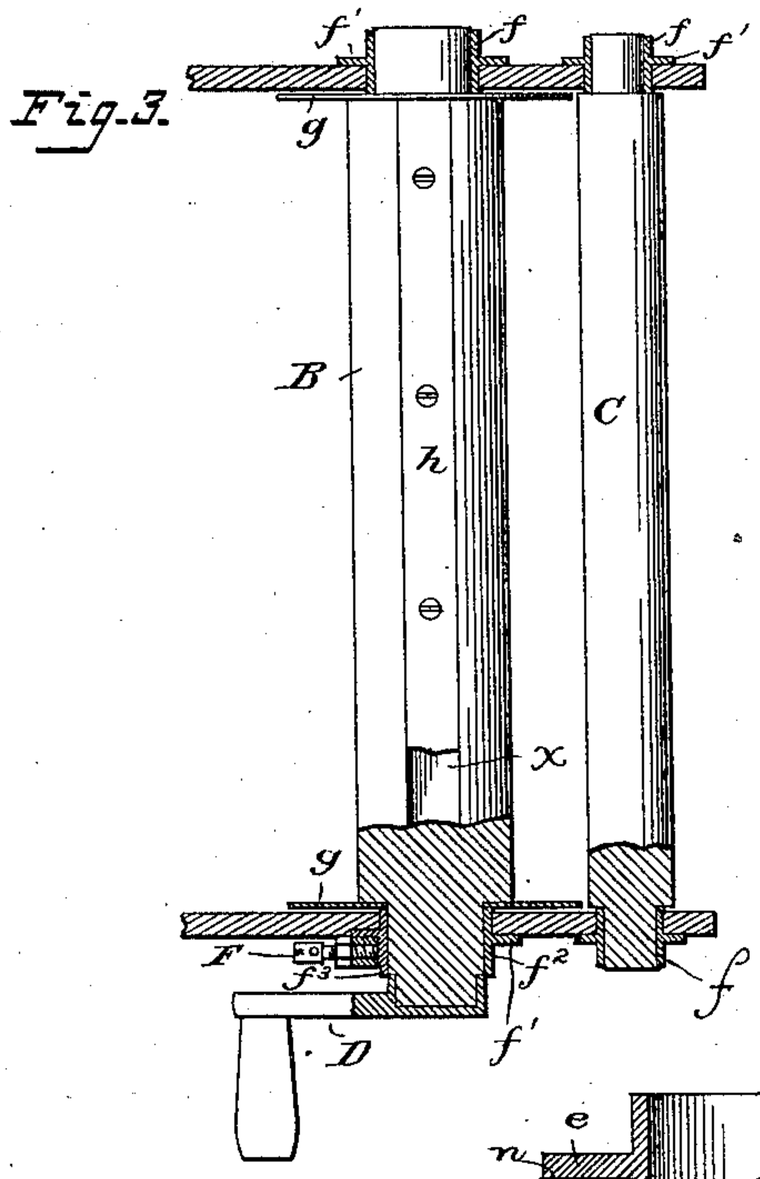


Fig. 4.

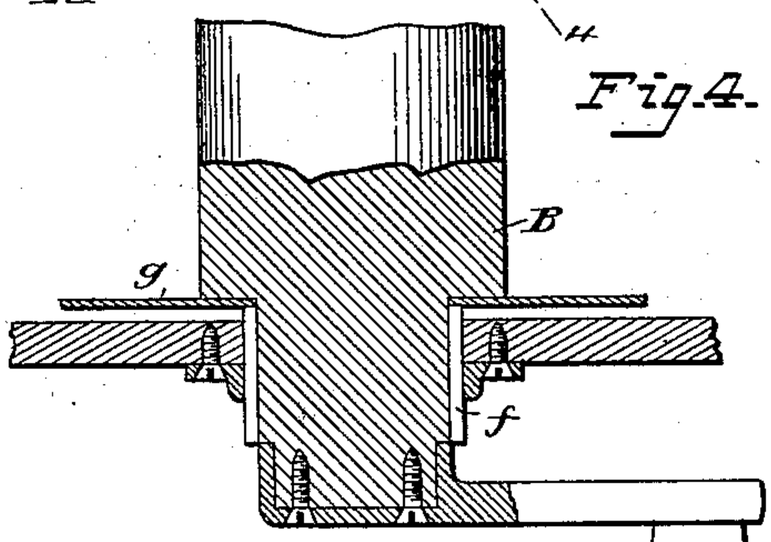


Fig. 6.

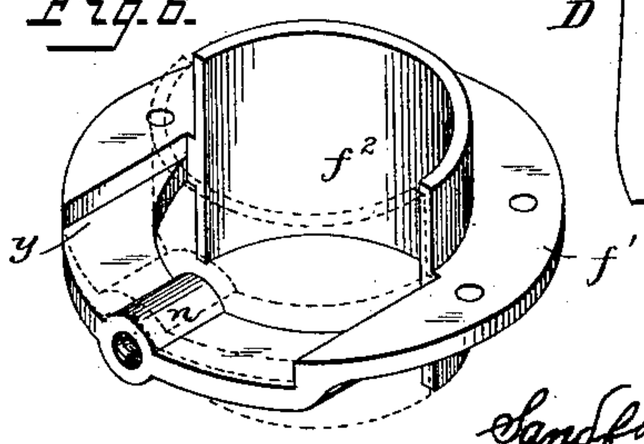
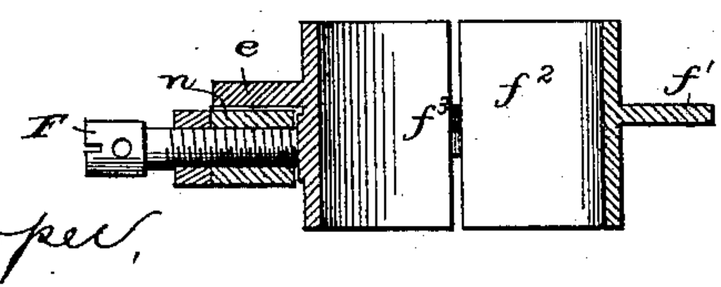


Fig. 5.



Attest:
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Inventor:
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UNITED STATES PATENT OFFICE.

SANDFORD H. HARROD, OF CANTON, AND SALEM T. LAMB, OF NEW ALBANY, ASSIGNORS OF ONE-THIRD TO WILLIAM W. BORDEN, OF NEW ALBANY, INDIANA.

STATION-INDICATOR.

SPECIFICATION forming part of Letters Patent No. 367,392, dated August 2, 1887.

Application filed March 3, 1886. Serial No. 193,892. (No model.)

To all whom it may concern:

Be it known that we, SANDFORD H. HARROD and SALEM T. LAMB, citizens of the United States, and residents, respectively, of Canton, Washington county, State of Indiana, and New Albany, Floyd county, State of Indiana, have invented certain new and useful Improvements in Station-Indicators, of which the following is a specification.

Our invention relates to that class of indicators usually employed in railway-cars for exhibiting the names of the successive stations upon a shifting band or canvas; and our invention consists in constructing and arranging the parts of the apparatus, as fully described hereinafter, so as to secure an extended display of the names, a proper bearing for the journals of the rollers and drums, prevent the displacement of the latter, and facilitate the construction and manipulation of the apparatus.

In the drawings, Figure 1 is a front elevation of our improved station-indicator. Fig. 2 is a cross-section, enlarged, on the line 1 2, Fig. 1. Fig. 3 is a vertical section on the line 3 4, Fig. 2. Fig. 4 is an enlarged section of one end of one of the drums. Fig. 5 is a cross-section of one of the clamp-bearings. Fig. 6 is a detached perspective view of the fixed sections of the bearings.

The apparatus consists, essentially, of the case A, a frame or support, E, above the case, drums or rollers B B, guide-rollers C C, drum-operating handles D D, and a sheet or canvas, I, which is wound upon the drums and passes round the guide-rollers.

In order to make the case A of thin stuff, and at the same time secure the requisite strength, we provide the sides *a a* with cleats *b b*, so arranged that the back *c* may be inserted within the sides and rest upon the cleats; and a partition, *d*, is centrally arranged to support the back, as shown in Fig. 2, and a light frame, J, which may be rabbeted to receive the edges of a front plate, K, of glass, and is secured to the front of the frame, so as to hold the glass in position thereon, and a guide plate or board, L, is arranged parallel to the glass at a short distance therefrom, to leave a space sufficient for the passage of the canvas without its contact with the face of the glass. The board L is, however, so close to the glass as to effectually prevent the canvas from wrinkling or creasing, so that the names and other matter upon the canvas will be distinctly presented to those who may inspect the same.

In order to secure firm and immovable bearings for the journals of the rollers, while at the same time using very light material for the construction of the case, we make such bearings of metal. For instance, the upper bearings of the drums B and the upper and lower bearings of the guide-rollers consist each of a metallic tube, *f*, adapted to receive the journal of the roller, and an annular flange, *f'*, arranged externally midway between the ends of the tube and perforated for the passage of screws, which secure it to the top or bottom of the case, the inner end of the tube extending through an opening in said top or bottom. The metallic tube constitutes a durable and almost frictionless bearing for the journal of the roller, while the flange *f'* affords a ready means of securing the bearing to the thin material of which the box is made, and secures such a wide support that the position of the bearing will not be changed by the warping of the wood.

To prevent the canvas from rubbing at its edges against the case, we provide each roller with an end flange, consisting of a disk, *g*, of thin metal, having a central opening for the passage of the journal, and secured by screws against the shoulder formed upon the roller by contracting the end portion to form the journal, and to securely fasten the end of the canvas to each drum or roller we provide the latter with a longitudinal groove, *x*, in which fits a detachable strip, *h*, secured by screws and binding the end of the canvas closely in the groove, and having its outer face flush with that of the drum.

In order to secure such a frictionless resistance to the turning of the drums as will prevent the canvas from being loosened by the shaking of the case, we apply friction to the journals of the drums to an extent sufficient to prevent them from working loose, without interfering with their ready rotation when power is applied to the handles or cranks. As one means of securing this friction, and at the same time obtaining a desirable bearing for the journals of the drum, we use a bearing somewhat of the character before described;

but the portion *f*, instead of being tubular, is a semi-tube, f^2, as shown in Fig. 6, the other portion, f^3, Fig. 5, being a separate piece and having an external flange, *e*, adapted to a recess, *y*, formed in the flange *f'* of the bearing, so that the portion f^3, which is curved to fit the side of the journal, may be moved to and from the portion f^2 under the action of a screw, F, which extends through a hub, *n*, formed upon the flange *f'*. A curved section of the flange *e* extends over the hub *n*, and aids in guiding the movable section of the bearing. The clamping-bearing thus formed is secured to the casing by screws passing through the flange *f'*, as before described, and the journal of the drum extends between the curved sections f^2 f^3, and is clamped with a pressure depending upon the adjustment of the screw F.

It will be evident that the bearing may be constructed in different ways, with one section movable so as to be clamped against the journal to vary the frictional resistance to the movement of the drum.

The crank-handles D are arranged upon the lower ends or journals of the drums, so that each can be readily seized when the case is secured in an elevated position to turn either drum to any extent required to bring the matter upon the canvas into proper position for inspection. These crank-handles may be constructed in any suitable manner. I prefer to form each of them with a socket for the reception of the contracted end of the journal, to which it is secured by means of screws, as best shown in Fig. 4.

By the above-described arrangement the matter upon the canvas may be brought to its desired position and the canvas moved from time to time as required. The frame or support E supports a card containing the words "The next station," and on the canvas is a space for the names of the stations in succession, and a space below for the figures indicating the distance of the station named from the preceding station. There is also generally additional space for one or more main stations on the line, and space below each for the distance to such station. Thus, when the canvas is arranged as shown in Fig. 1, the name "New Albany" indicates the name of the next station, and the matter below, "Six miles," shows the distance to said station. The names "Louisville" and "Chicago," and figures below also show the distances to said stations.

It will be obvious that the names and figures will in each case accord with the names and distances on the line traveled.

Without limiting ourselves to the precise construction and arrangement of parts shown, we claim—

1. In a station-indicator, the combination of a casing having sides and ends, cleats secured to the ends, a back secured to said cleats and to the interior surface of said sides and ends, a partition extending within the casing and dividing the same into two separate compartments, a drum arranged in each of said compartments and provided with a longitudinal groove to receive detachable strips, journals on the drums of less diameter than the latter, whereby shoulders are formed, disks secured to said shoulders, and a belt carrying legends, all substantially as and for the purpose described.

2. In a station-indicator, the combination of a casing provided with two separate compartments, a grooved winding-drum located in each of said compartments, shoulders formed upon the ends of the drums and constituting journals therefor, disks surrounding and secured to said shoulders, tubular journal-bearings, each having a projecting flange midway between its ends, and a traveling band, substantially as and for the purpose described.

3. In a station-indicator, the combination of a casing separated by a partition into two compartments, a belt carrying legends, a winding-drum placed in each of said compartments and provided with journals and journal-bearings for said drums, each consisting of a semi-tubular section having an annular flange formed thereon midway between its ends, and a second semi-tubular section adjustably supported by said annular flange, substantially as and for the purpose described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

SANDFORD H. HARROD.
SALEM T. LAMB.

Witnesses:
ANDROS HUNCILMAN,
ISAAC BULLOCK.