

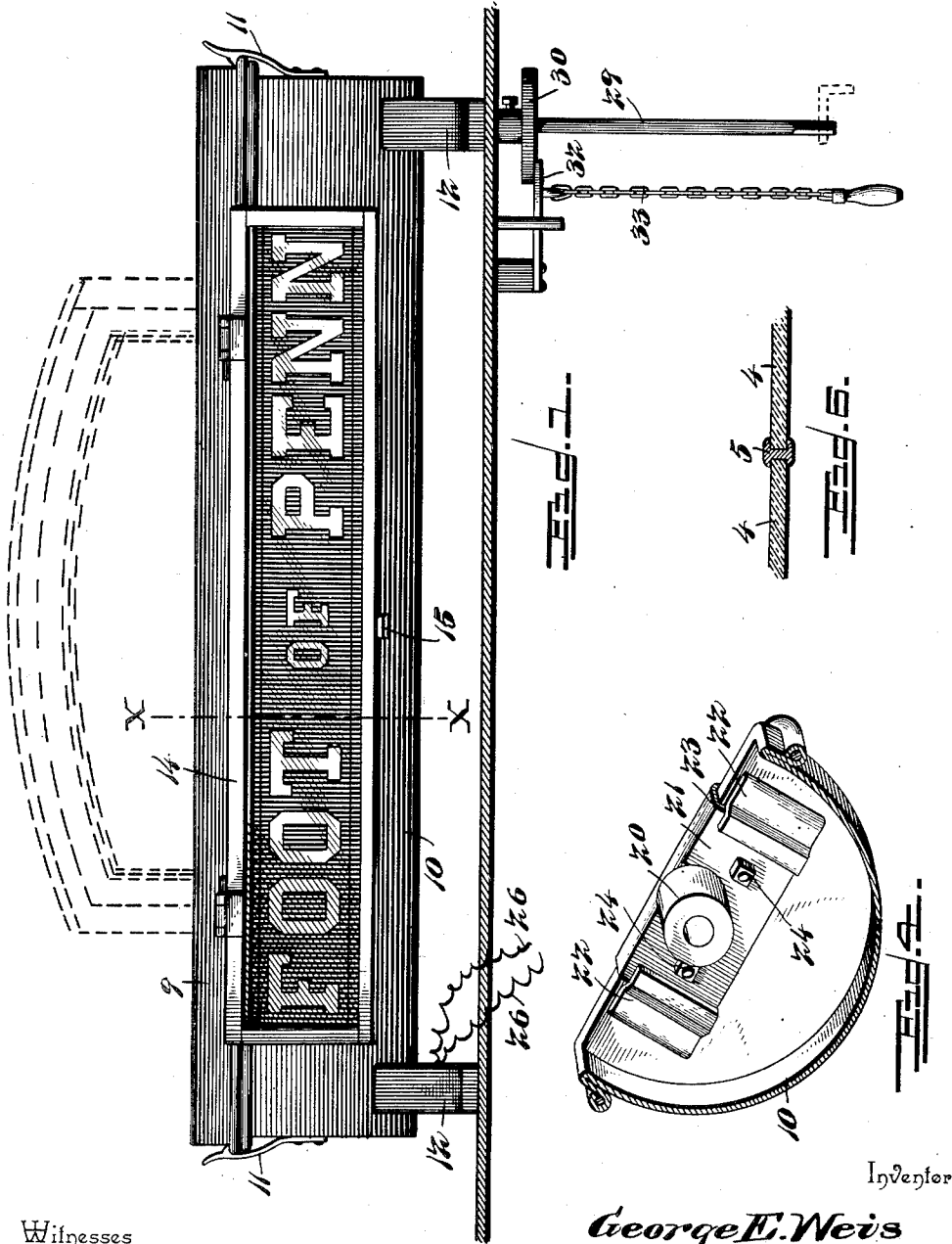
(No Model.)

2 Sheets—Sheet 1.

G. E. WEIS.
STREET CAR SIGN.

No. 586,583.

Patented July 20, 1897.



Inventor

George E. Weis

Witnesses
E. H. Stewart, By his Attorneys,
V. B. Hillyard.

C. A. Snow & Co.

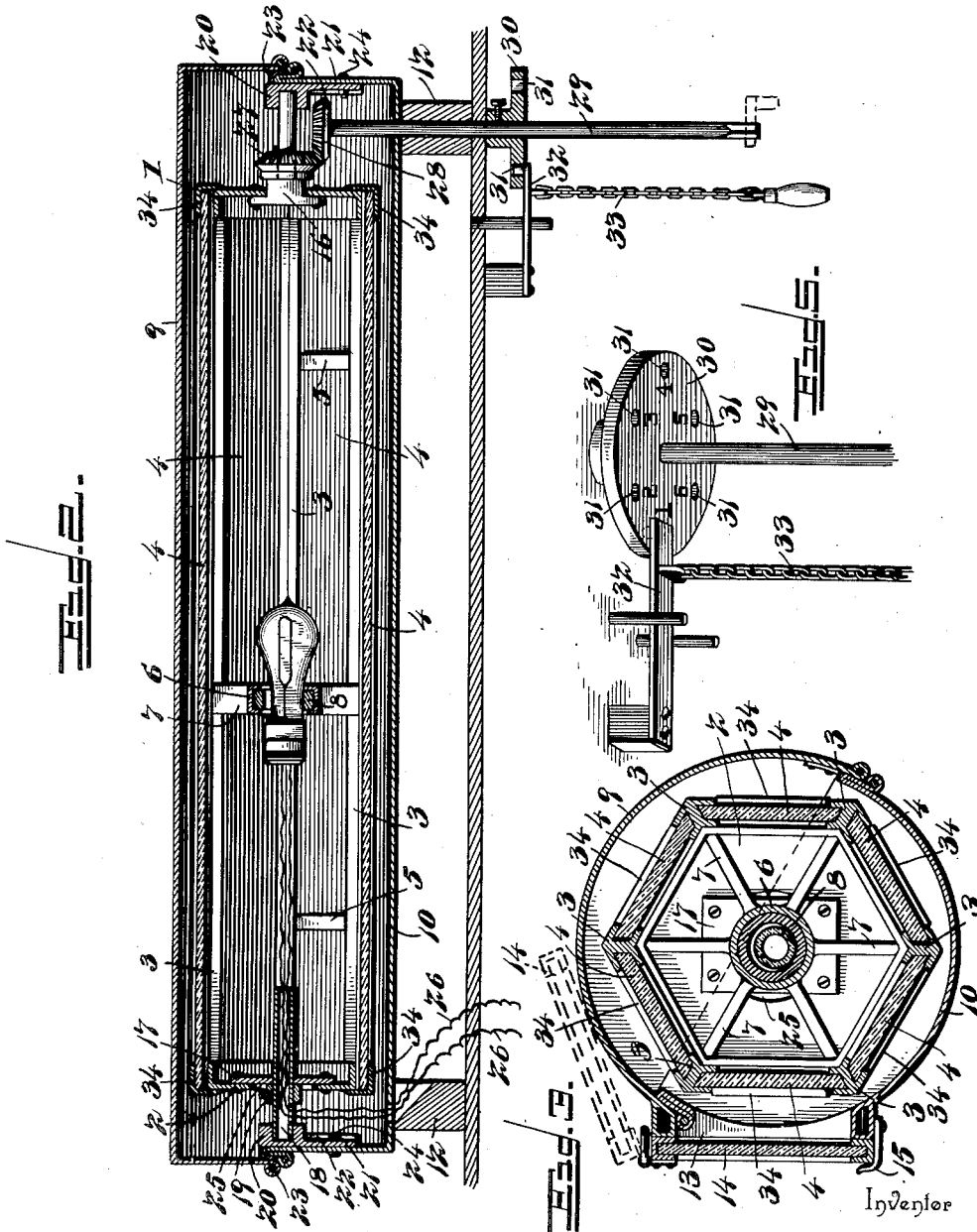
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E. S. Stewart By *W. E. Weis* Attorneys,
V. B. Hillyard.

George E. Weis

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UNITED STATES PATENT OFFICE.

GEORGE ED. WEIS, OF READING, PENNSYLVANIA.

STREET-CAR SIGN.

SPECIFICATION forming part of Letters Patent No. 586,583, dated July 20, 1897.

Application filed March 27, 1897. Serial No. 629,690. (No model.)

To all whom it may concern:

Be it known that I, GEORGE ED. WEIS, a citizen of the United States, residing at Reading, in the county of Berks and State of Pennsylvania, have invented a new and useful Street-Car Sign, of which the following is a specification.

This invention relates to that class of sign apparatus applied to street-cars to convey to the public the destination, route, the name of the line, or other information which it may be desirable to impart. Apparatus of this kind is constructed so as to be readable by day or night, being illuminated after dark, so as to cause the sign matter to stand out in bold relief.

The present invention is designed to enable the rotatable sign cylinder or drum to be removed quickly when the car changes its destination or is transferred to another line, so as to be substituted by one bearing the proper matter or information to be conveyed to the traveling public.

A further purpose of the invention is to so mount the illuminating mechanism whereby injury thereto is obviated by the jolt and jar of the car or by comparatively rough handling, the supporting means for the illuminator being light to avoid casting deep shadows and being disposed so as to strengthen the frame-bars of the cylinder or drum comprising the sign apparatus.

A further purpose of the invention is to improve the general construction of the aforesaid class of apparatus and increase their effectiveness and usefulness, whereby repairs can be readily effected and are not frequently required, as the parts are so constituted as not to be liable under ordinary usage to become disarranged or disabled.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a front view of a sign apparatus for street-cars as it will appear when constructed in accordance with this invention. 55
Fig. 2 is a longitudinal section thereof. Fig. 3 is a transverse section on the line X X of Fig. 1, the dotted lines showing the storm-door thrown back out of the way. Fig. 4 is a detail perspective view of an end bearing 60 for the rotatable sign cylinder or drum. Fig. 5 is a detail perspective view of the means for securing the sign cylinder or drum in an adjusted position. Fig. 6 is a detail view showing the channeled bar between sections 65 of a sign-slat.

Corresponding and like parts are referred to in the following description and indicated in the several views of the accompanying drawings by the same reference-characters. 70

The rotatable sign cylinder or drum consists of a frame of skeleton form and comprising ends 1 and 2 and longitudinal bars 3, the latter being secured in any substantial manner at their extremities to the end pieces 1 and 2. The longitudinal bars 3 are channeled or grooved and receive sign plates or slats 4 of translucent material to admit of the light making readable the matter imprinted thereon at night, and these plates or slats may be 80 of a single length or provided in sections which have their opposing ends fitted into channeled bars of lead 5, secured at their extremities to adjacent bars 3. The longitudinal bars 3 are strengthened and braced at a 85 point between their ends by a spider in the form of an annulus 6 and arms 7, radiating from the annulus and secured at their outer ends to the bars 3. This spider also constitutes a support for the illuminator and central- 90 izes the latter, which in the present instance is an incandescent lamp mounted loosely in the annulus 6, so as to admit of the sign cylinder or drum turning without twisting the conductors leading to the lamp. In order to prevent injury to the lamp from rough handling 95 or the jolting or jarring of the car, the annulus is provided with a gasket or cushioning-ring 8, which is retained in place between the flanged edges of the annulus, as clearly indicated. 100

The casing or housing for the operating mechanism is approximately of cylindrical form and comprises upper and lower parts,

the upper part 9 being hinged to the lower part 10 and being held in place by catches 11. This casing is secured to blocks 12, applied to the top of a car and fastened thereto in any desired manner, and the lower part has an observation-opening 13 in its front side, through which the sign plates or slats are exposed, each coming in position opposite the opening at the proper time. This observation-opening is surrounded by a frame and is adapted to be closed in inclement weather by a storm-door 14, hinged to the free edge of the movable part 9 of the casing and secured by a catch 15, applied to the lower part 10. This storm-door comprises a frame and a glass panel, the latter protecting the opening 13 without obstructing the matter in position to be read. When not required, the storm-door may be thrown back out of the way, as indicated by the dotted lines in Fig. 3, or it may be removed, as the hinges are separable by reason of the pintles being detachable.

The sign cylinder or drum is mounted so as to turn freely about a longitudinal axis and is provided at one end with a fixed journal 16 and at its opposite end with a plate 17, bolted or otherwise detachably connected with the end 2 and apertured to receive a hollow journal 18, applied to the adjacent end of the casing, said cylinder being held from longitudinal displacement in one direction by means of a collar 19, secured to the journal 18 by a binding-screw, and in the opposite direction by the end of the journal 16, engaging with the inner end of a bearing 20, formed with or applied to a plate 21, having detachable connection with the end of the casing. Like plates 21 have similar connection with the ends of the casing and operate in guides 22, applied to the inner sides of the said ends, and have their upper edges bent, as shown at 23, to engage over the top edges of the said ends. Bolts or like fastenings 24 secure the plates 21 to their respective ends, and when removed admit of the plates 21 being slipped from the guides 22 and detached from the casing. Each plate has a bearing 20, in which operates the journal 16 or which receives the journal 18. By having the bent portions 23 extend over the ends of the casing the plates 21 are prevented from slipping when the fastenings 24 are not in place, and they serve as stops to be engaged by the hand or an instrument when it is required to remove the plates to change the sign-cylinder.

When it is required to remove the sign cylinder or drum for any reason, the plate 21, adjacent to the journal 16, is loosened and detached, and the plate 17, being loosened and disengaged from the end piece 2, is slipped upon the hollow journal 18, and it and the socket portion of the lamp are passed through an opening 25 in the end piece 2, thereby freeing the cylinder, as will be readily understood. The electrical conductors 26 pass through the hollow journal 18 and connect with a convenient portion of the car included

in the circuit, thereby admitting of a sign-cylinder being removed or placed in position without disturbing the electrical connection.

The operating mechanism for turning the sign-cylinder consists of a miter-gear 27, secured on the fixed journal 16, and a companion miter-gear 28, intermeshing with the miter-gear 27 and secured on a shaft or rod 29, passing vertically through the casing and one of the blocks 12 and through the roof of the car and extending within convenient reach of the motorman or other person whose duty it is to attend to the shifting of the sign apparatus at the required points. A disk 30 is secured to the shaft 29 below the roof of the car and has a series of openings 31, corresponding in number with the sides of the cylinder or drum, and these openings are indicated by designating-characters, so that the person shifting the sign may be apprised when the required one is in position opposite the observation-opening.

A catch 32 is adapted to enter one of the openings 31 and lock the sign cylinder or drum against rotation in either direction until released, which is effected by means of a cord or chain 33, having connection with the catch 32 and provided with a handle within convenient reach, so as to be drawn upon to release the catch when it is required to shift or turn the cylinder to bring a new sign in position to be read.

The sign cylinder or drum as shown is hexagonal, although it may be of any desired polygonal outline, according to the number of signs to be displayed. Metal plates 34 are secured to the end pieces of the cylinder or drum opposite the spaces formed between the longitudinal bars 3, and their outer ends are bent so as to extend over the sign plates or slats to retain the latter in place. One set of these plates is of lead, so as to be readily bent to admit of the sign-plates being removed or placed in position.

It will be understood that the fastenings 24 for the plates 21 may be dispensed with, as the said plates will be held in place by the cover or part 9 engaging with the upper bent ends thereof, thereby greatly facilitating the removal of the sign-cylinder when required. The number of illuminators may be varied to suit the size of the sign and may be disposed as found most convenient.

Having thus described the invention, what is claimed as new is—

1. In a sign apparatus of the character set forth, the combination with a rotatable sign drum or cylinder, of a spider located within the said cylinder and comprising an annulus and arms, the latter being secured at their extremities to the frame-bars of the cylinder, and an illuminator or lamp supported solely by means of the spider whereby the sign-drum is free to rotate and the lamp will remain stationary, substantially as set forth.

2. In a sign apparatus of the character specified, the combination with a rotatable sign

cylinder or drum, of a spider bracing and connecting the frame-bars of the said cylinder at a point about midway of their ends, and comprising an annulus, a gasket or cushioning-ring located within the annulus, and an illuminator or lamp loosely supported within the said gasket or cushioning-ring whereby the sign-drum is free to rotate and the lamp will remain stationary, substantially as specified.

3. In a sign apparatus for the purpose described, the combination with the rotatable sign cylinder or drum, of a spider comprising an annulus and radial arms secured at their outer ends to the frame-bars of the cylinder, the annulus having inner flanges at its edges, a gasket or cushioning-ring secured between the flanges of the annulus, and an illuminator or lamp loosely supported within the cushioning-ring whereby the sign-drum is free to rotate and the lamp will remain stationary, substantially in the manner set forth for the purpose specified.

4. In a sign apparatus for street-cars, the combination of a casing, a rotatable sign cylinder or drum, a plate provided with a bearing forming a support for a journal of the said cylinder, and having detachable connection with the casing, and having a portion bent to engage over an edge of the casing, and means for securing the said plate in position, substantially as set forth.

5. In a sign apparatus for street-cars, the combination of a casing having guides at an end, a rotatable sign cylinder or drum, a plate provided with a bearing to receive a journal of the said cylinder and mounted in the aforesaid guides, and having an end portion bent to engage over an edge of the casing, and means for securing the plate, substantially as set forth.

6. In a street-car sign apparatus, the com-

bination of a casing, a rotatable sign cylinder or drum removably mounted within the casing and having an opening in one end, and provided at its opposite end with a journal fitted in a removable bearing, a fixed journal secured to the opposite end of the casing, a plate spanning the opening in the end of the cylinder adjacent to the fixed journal and detachably connected therewith upon oppositesides of the said opening, and mounted upon the fixed journal, and a collar secured to the last-mentioned journal and engaging with the aforesaid plate to prevent longitudinal displacement of the cylinder, substantially as set forth.

7. A street-car sign apparatus comprising a casing composed of upper and lower parts secured together at one edge by a hinge-joint, the lower part having an observation-opening, a storm-door applied to the free edge of the upper part and adapted to close the said observation-opening, a rotatable sign cylinder or drum removably mounted within the casing, means for turning the cylinder, a graduated disk or plate secured to the shaft by means of which the cylinder is turned, and having a series of openings, a catch co-operating with the openings of the disk or plate to indicate the relative position of the cylinder and hold it in the located position, and a cord or chain having connection with the catch and extending within convenient reach to be drawn upon to release the catch, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEO. ED. WEIS.

Witnesses:

CHAS. A. STRAUSS,

CAMERON E. STRAUSS.