(No Model.) 2 Sheets—Sheet 1.

J. D. BROWNE.

ROTATABLE SIGN FOR STREET CARS.

No. 571,942. Patented Nov. 24, 1896.

Fig. 1.

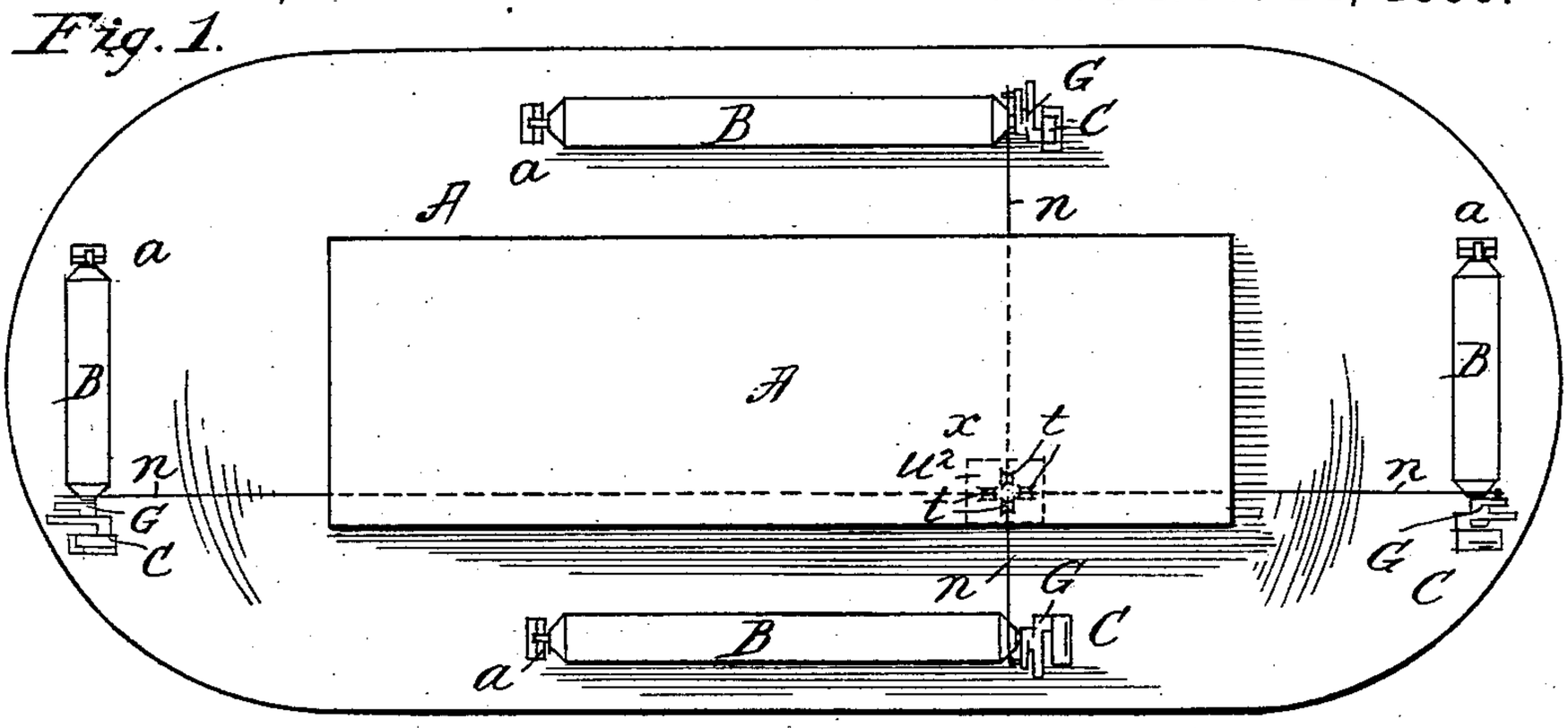


Fig. 2.

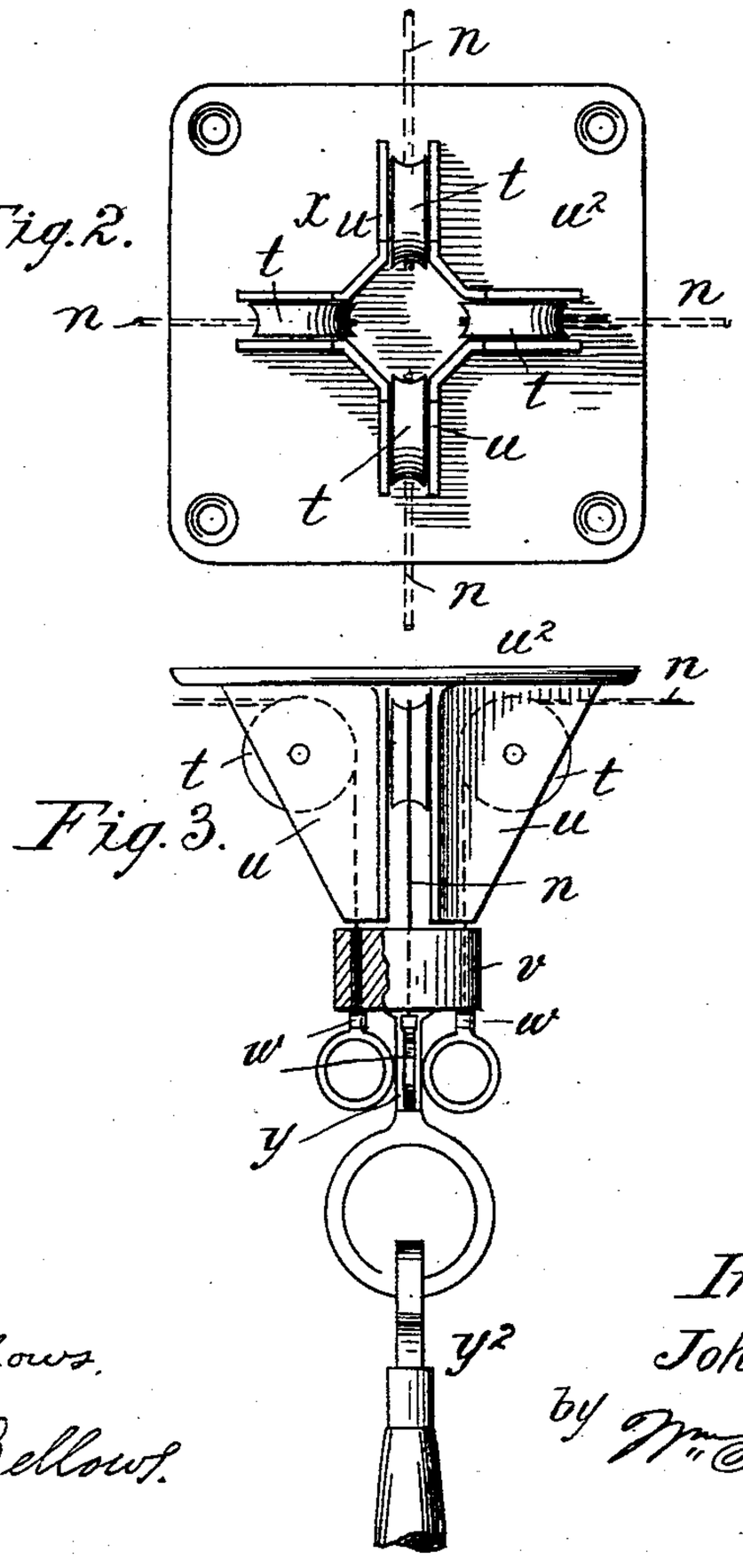


Fig. 3.

Witnesses:
M. M. Bellows.
M. G. Bellows.

Inventor,
John D. Browne,
by Wm. S. Bellows,
Attorney

(No Model.) 2 Sheets—Sheet 2.

J. D. BROWNE.

ROTATABLE SIGN FOR STREET CARS.

No. 571,942. Patented Nov. 24, 1896.

Fig. 4.

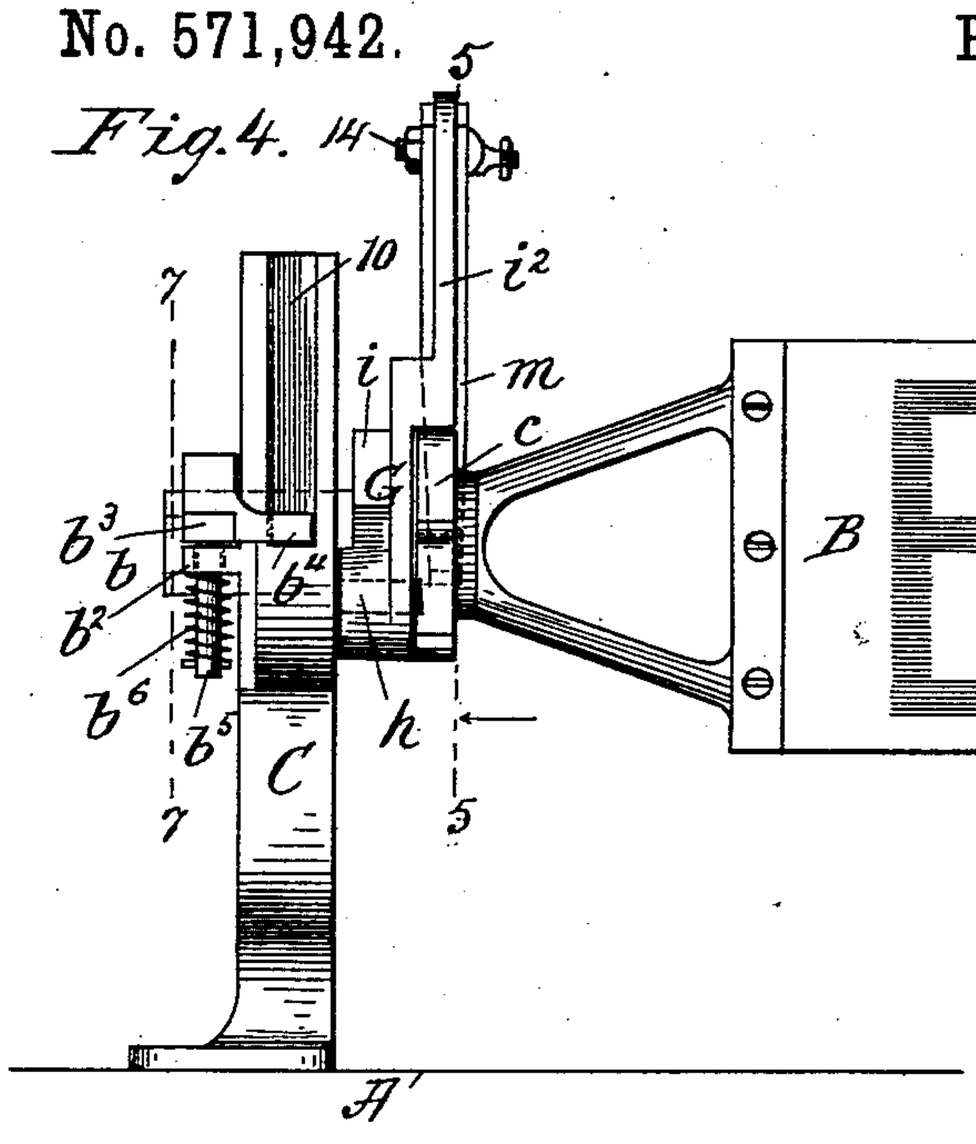


Fig. 5.

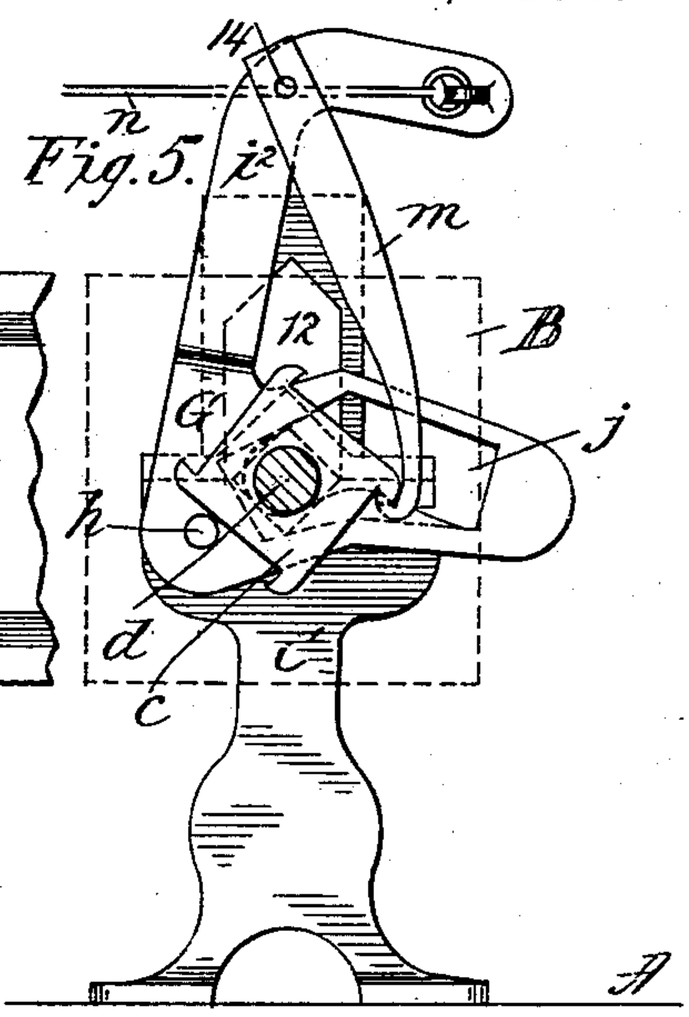


Fig. 6

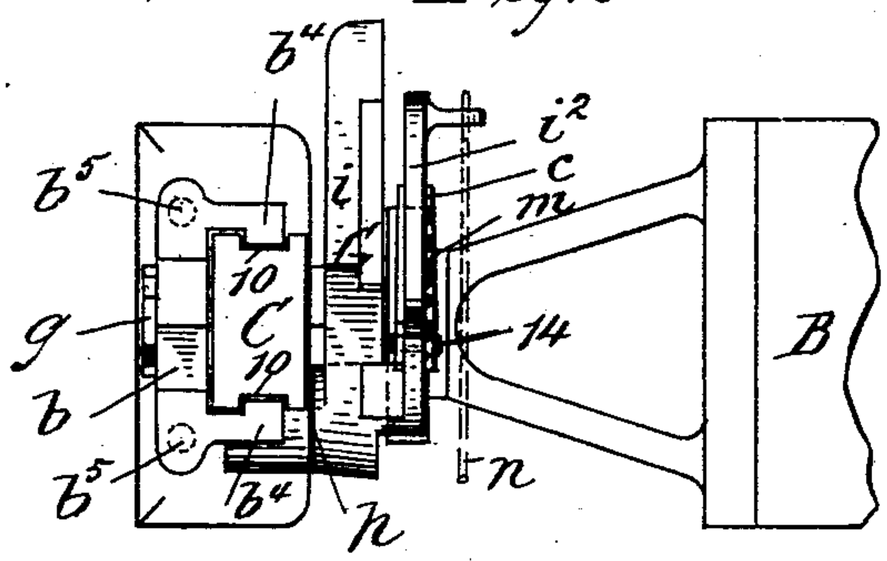


Fig. 7.

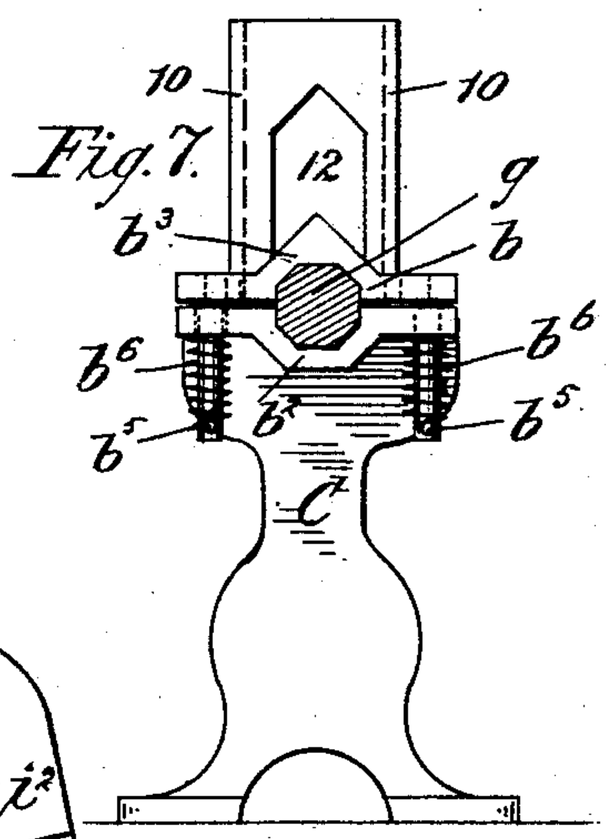


Fig. 8.

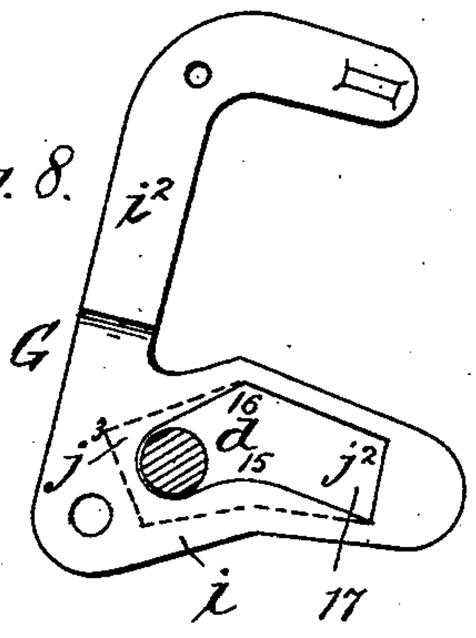


Fig. 9.

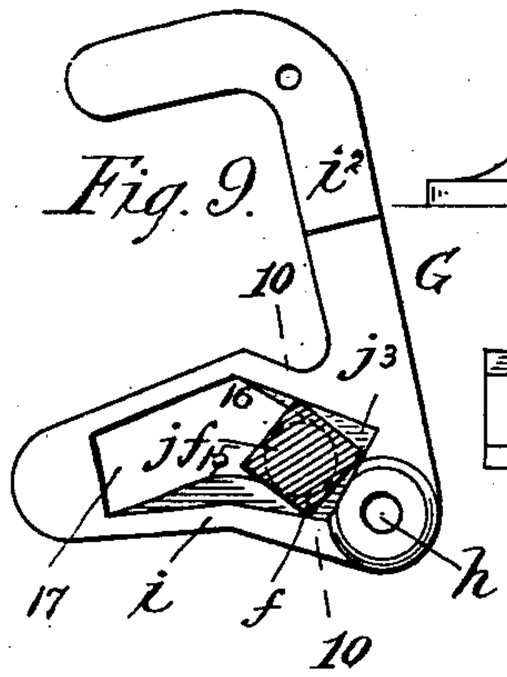
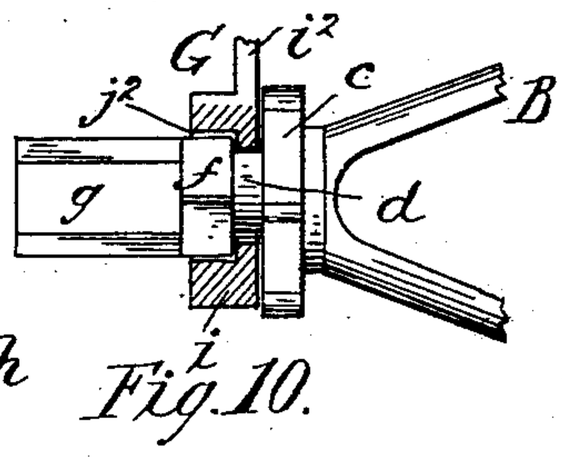


Fig. 10.



Witnesses:
N. M. Bellows.
H. G. Bellows.

Inventor,
John D. Browne,
by Wm. F. Bellows
Attorney.

UNITED STATES PATENT OFFICE.

JOHN D. BROWNE, OF SPRINGFIELD, MASSACHUSETTS.

ROTATABLE SIGN FOR STREET-CARS.

SPECIFICATION forming part of Letters Patent No. 571,942, dated November 24, 1896.

Application filed April 27, 1896. Serial No. 589,220. (No model.)

To all whom it may concern:

Be it known that I, JOHN D. BROWNE, a citizen of the United States, and a resident of Springfield, in the county of Hampden and State of Massachusetts, have invented certain new and useful Improvements in Rotatable Signs for Street-Cars, of which the following is a specification.

This invention relates to improvements in the means for supporting rotatable signs for street-railway cars and for rotating or partially rotating the same to bring forward or outward any desired sign-face.

An objection to signs and devices of the class referred to which has been heretofore found consists in the difficulty in limiting the signs in their rotational movements so that any given face will be squarely forward, and the principal object of this invention is to provide, combined with the means for operating the sign, also means for preventing the sign from being left in a tipped or canted position.

Another object is to provide improved mechanism which is capable of simultaneously operating the several signs of a car, or each sign individually.

Reference is to be had to the accompanying drawings, in which—

Figure 1 is a plan view of the top of a street-car, having indicated thereon the four signs and the relative positions of the operating devices. Fig. 2 is a plan view of an inverted pulley fixture which is comprised within the car as a part of the sign-operating mechanism, to be hereinafter referred to. Fig. 3 is an elevation of the same fixture of which Fig. 2 is a part. Fig. 4 is an elevation of one end support for the sign with the rotating mechanism applied thereat. Fig. 5 is a sectional elevation as taken on the line 5 5. Fig. 6 is a plan view of Fig. 4. Fig. 7 is an end elevation of Fig. 4, the journal-shaft for the sign being in section as taken on the line 7 7. Figs. 8 and 9 are detached elevations of a casting employed in the device, showing the journal-shaft in cross-section. Fig. 10 is a side view of the journal-shaft of the sign and said casting as in section on line 10 10, Fig. 9.

In the drawings, A represents a car-top having the four signs B thereon at opposite ends and sides, each sign having end journal shafts or gudgeons, which at one end of the sign rest in journal-standards *a*, of a simple and common form, and which at their other ends are peculiarly formed and rest in separable journal-boxes *b* of the standards C, and at such end of the sign the journal-shaft has a four-toothed ratchet *c*. Next thereto it is round for a short part of its length, as seen at *d*. Next it is square, as seen at *f*, and its extremity is of octagonal form, (seen at *g*.)

The separable journal-box at *b* consists of the fixed lower part b^2 of the standard C and the movable upper part b^3, which is provided with the guiding-lugs b^4, having a sliding fit in the vertical ways 10 10 in the standard. The movable part b^2 of the journal-box has the members b^5 depending through and below perforations in extensions of the fixed part b^2 of the box, which receive the springs b^6 under compression for normally maintaining the two-part box closed. The seat within the box is formed to receive and fit about the octagonal or otherwise prismatic end *g* of the journal-shaft. The standard C is vertically apertured, as seen at 12, to permit the free bodily vertical movement of the shaft which is imparted thereto, as will hereinafter appear.

On the opposite side of the standard from the separable journal-box is pivotally hung at *h* a casting G of peculiar shape, the same having an angular lower portion *i* and an upper lever extension i^2. The lower portion *i* has the aperture *j*, which through a portion of its thickness is in the form of an elongated angular slot j^2, while at the opposite side of the aperture is a face-wise-opening shallow chamber or depression j^3, having a rectangular end and widening therefrom toward the middle of the lower portion *i*, all as more particularly seen in Figs. 8, 9, and 10. The square part *f* of journal-shaft is disposed within the opening j^3, the round shaft part *d* being in the slot j^2, while the ratcheted part *c* lies alongside the face of the casting.

On the casting at 14 is pivotally hung the gravity-pawl *m*, the toothed end of which engages a tooth of the ratchet *c*. Said ratchet is set at quarters relative to the sign, as indicated in Fig. 5.

The lower portion of the casting, which is extended rearwardly from the pivot *h*, as well also as the rearward extension of the upright lever portion i^2, by gravity serve to maintain

the parts normally in the relations seen in Fig. 5. The cord *n* or like flexible medium of pull connection is attached to the lever extension of casting G.

Upon pulling cord *n* the casting G is swung on its pivot *h*, the edge portion 15 of slot j^2 causing the journal of the shaft to rise, as permitted by the spring-box, at which time the widened part 16 of the aperture is adjacent the squared part of the journal, so that the journal is now free to rotate, as it is caused to do by the pawl which receives its operative motion in conjunction with the swing of casting G. The shaft, being rotated a quarter-turn by the pawl as the shaft part *d* rides up on the slot edge 15 and while the widened part 16 of the aperture is about the squared shaft part *f*, is prevented from an excessive rotation (whereby the sign would be carried to present its next face out of perpendicular) by the squared and narrowed portion 17 of the aperture being brought into a restraining engagement with shaft portion *f*. As the casting G has its return swing by gravity the sign-shaft is lowered and resumes its position seen in Fig. 5, it being of course understood as having been a quarter turned, and the pawl assumes a position to take the next ratchet-tooth. The octagonal or equivalent prismatic form of the extremity *g* of the journal-shaft, coacting with the correspondingly-formed separable journal-box therefor, assists in maintaining the sign in its squared position, the box opening sufficiently against the spring b^6 to permit the shaft to turn when the casting G is swung.

The several pull-cords *n* run horizontally from their connection with the lever extensions of the several castings G over the car-top through the vertical wall of the raised deck A^2 and over and down around the respective sheaves *t* of the group thereof at *x*. These pulleys are mounted in depending brackets *u* therefor of the casting u^2, which is screwed to the deck-roof, and they pass downwardly through perforations therefor in a circular block *v*, they having at their lower ends individual rings or handles *w*. The said block also has a depending stem *y*, to which a suitable handle y^2 is secured.

Each pull-cord may be separably operated and through it the corresponding sign may be turned, or by drawing downwardly on the common handle y^2 the block may be pulled down, which, by its abutment with the several handles *w*, causes all the signs to be simultaneously turned.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with a rotatable sign having a prismatic-formed journal and a fixed ratchet-wheel thereon, and a support for the journal, of a pivotally-supported part or casting having an aperture, the ends of which are narrower than the intermediate portion, which apertured casting embraces the prismatic journal, a pawl mounted on said casting to engage the ratchet-teeth of the journal, and means for imparting a swinging movement to the casting, all whereby the initial movement of the casting will disengage the prismatic journal, leaving the same free to be turned by the pawl, and whereby the final movement of the casting brings the further narrowed end of the said aperture into engagement with said journal restraining it against excessive rotational movement, substantially as described.

2. The combination with a rotatable sign having provided on its journal-shaft a series of ratchet-teeth, and also a round portion *d* and a squared portion *f* and a separable spring-closed journal-box for the extremity of the shaft, of a part or casting G pivotally mounted adjacent the shaft having an aperture therethrough comprising the angular slot opening at the one side, within which is disposed the round shaft portion, and the recess j^2 with squared end portions and a widened intermediate portion, within which aperture is disposed the squared portion of the shaft, and a pawl hung on said casting having a swinging movement therewith, and operating on said ratcheted journal-shaft, and means for imparting a swinging movement to the said part G, substantially as and for the purposes set forth.

3. The combination with the rotatable sign having provided on its journal-shaft a series of ratchet-teeth and having a round portion *d*, a squared portion *f* and also having its end of prismatic form, of a separable spring journal-box having a prismatic socket or seat for the end of the shaft, and a part or casting G pivotally mounted on the journal-box support and adjacent the shaft, having the aperture comprising the angular slot-opening at the one side and the aperture j^2 opening at the other which is squared at its ends and is intermediately widened, a pawl hung on said casting for engaging the said ratchet, and means for imparting a swinging movement to the said part G, substantially as described.

4. The combination with several rotatable signs for a car, and mechanism adapted to be moved for rotating said signs, of a series of sheaves suitably grouped and mounted at a convenient part of the car, cords or like flexible connections secured to said actuating mechanisms and running around said sheaves, and each having a handle whereby it may be individually drawn, and a part engaged with the several cords whereby when said part is drawn, all of the signs will be simultaneously operated.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two witnesses.

JOHN D. BROWNE.

Witnesses:
WM. S. BELLOWS,
N. M. BELLOWS.