J. A. KENNEDY-McGREGOR.

ADVERTISING DEVICE FOR RAILWAY CARRIAGES, ROAD VEHICLES, AND THE LIKE.

APPLICATION FILED FEB. 6, 1912.

1,066,626.

Patented July 8, 1913.

3 SHEETS—SHEET 1.

Fig. 2.

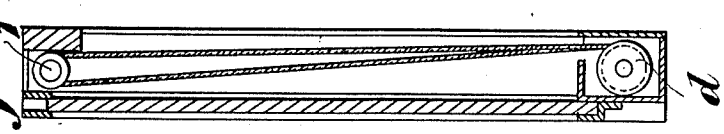
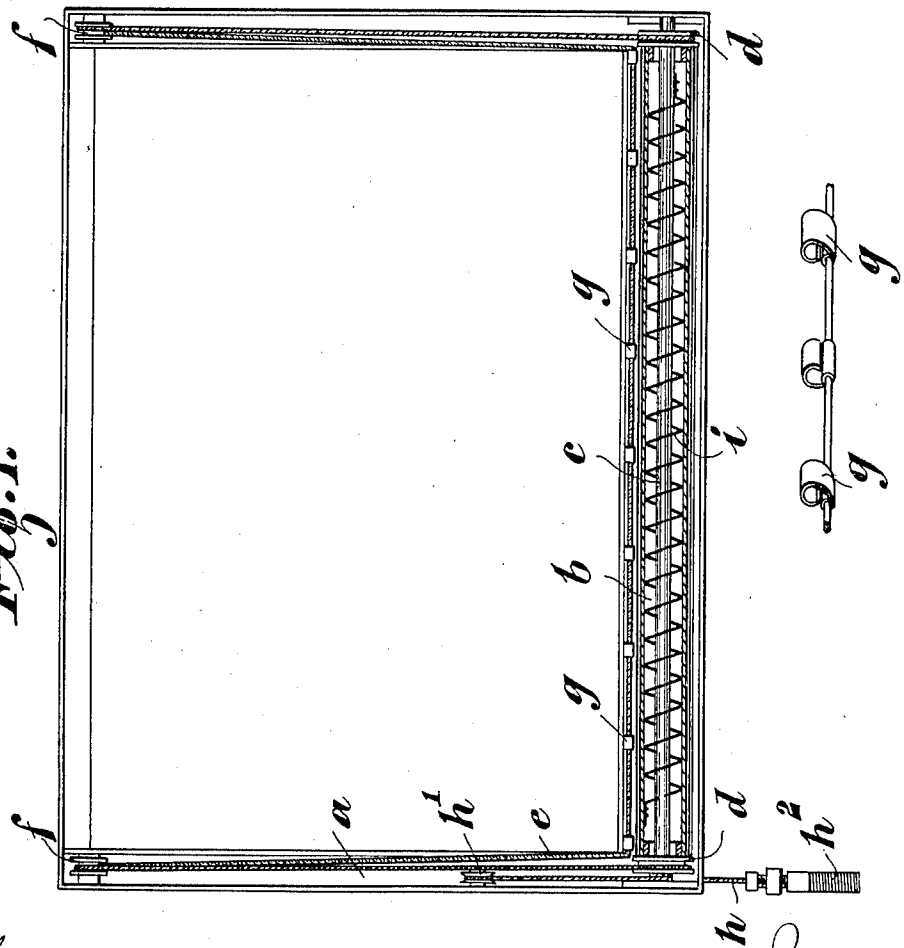


Fig. 1.



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3 SHEETS—SHEET 2.

Fig. 4.

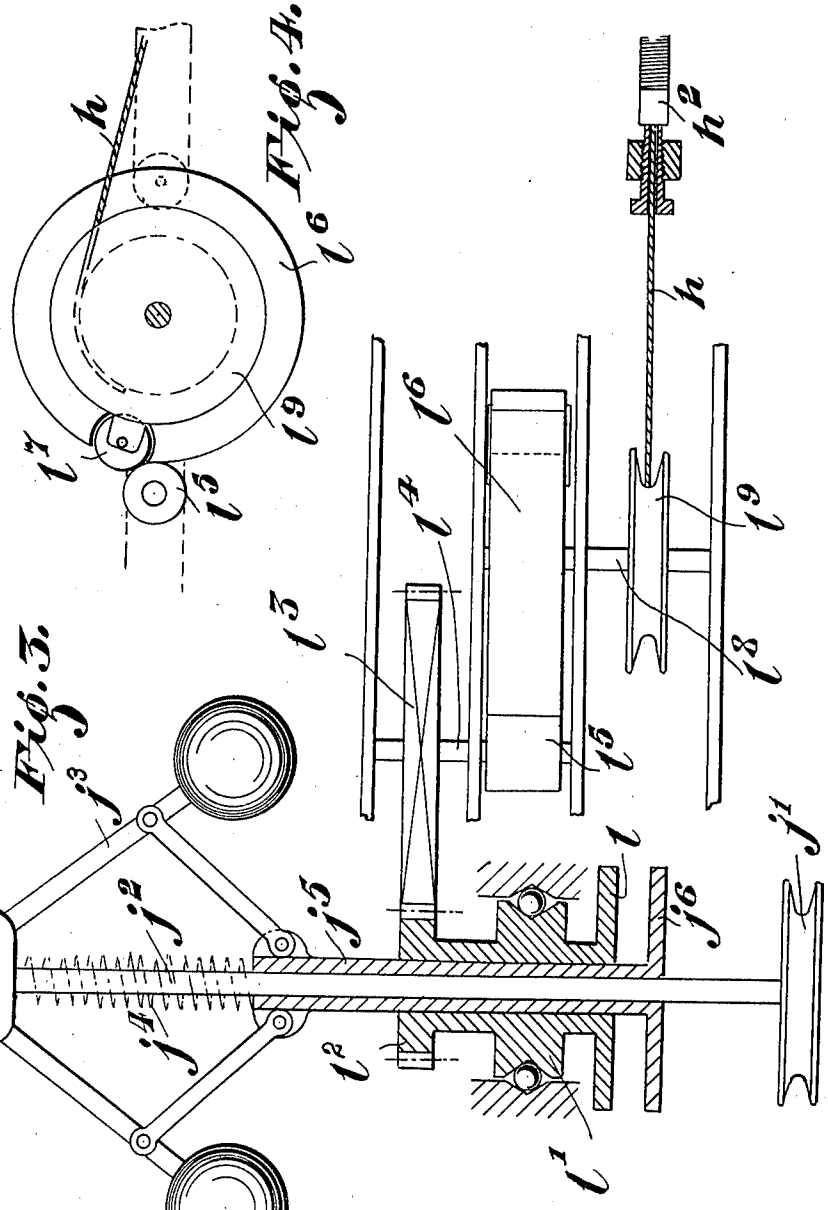


Fig. 3.

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COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

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3 SHEETS—SHEET 3.

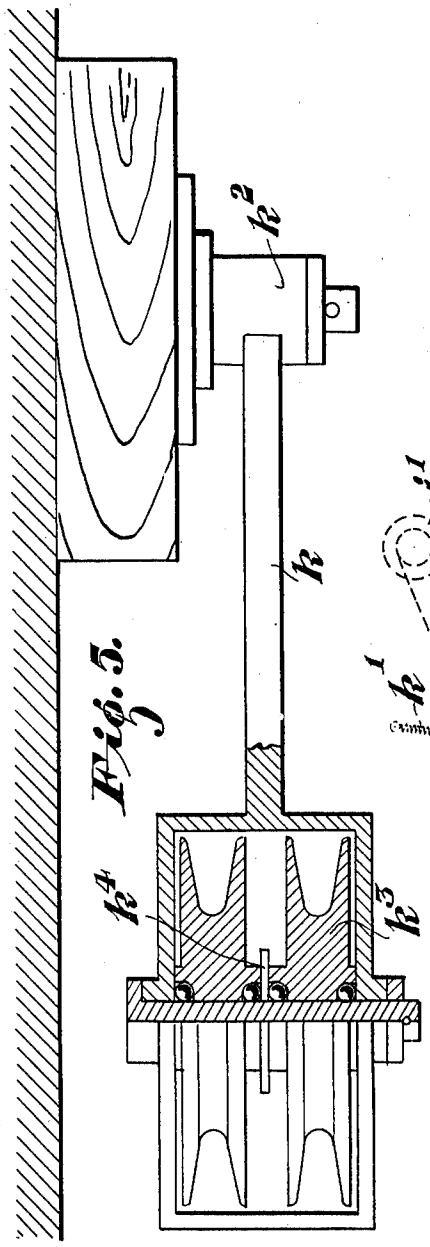


Fig. 5.

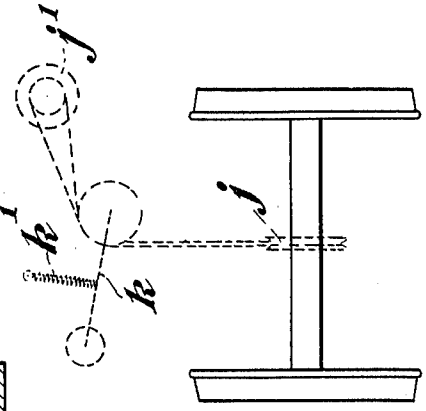


Fig. 6.

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UNITED STATES PATENT OFFICE.

JOHN ALEXANDER KENNEDY-McGREGOR, OF SUTTON COLDFIELD, ENGLAND.

ADVERTISING DEVICE FOR RAILWAY-CARRIAGES, ROAD-VEHICLES, AND THE LIKE.

1,066,626. Specification of Letters Patent. Patented July 8, 1913.

Application filed February 6, 1912. Serial No. 675,851.

To all whom it may concern:

Be it known that I, JOHN ALEXANDER KENNEDY-McGREGOR, a subject of the Kingdom of Great Britain, residing at Ley Hill Farm, Four Oaks, Sutton Coldfield, in the county of Warwick, England, formerly of 275 Slade road, Gravelly Hill, Birmingham, Warwickshire, engineer, have invented certain new and useful Improvements in Advertising Devices for Railway-Carriages, Road-Vehicles, and the Like, of which the following is a specification.

This invention relates to advertising devices of the kind which are fitted upon railway trains, motor cabs and other traveling vehicles and which devices are operated by the movement of the vehicle.

The main feature of my invention is that I employ a governor or controller so arranged or set that the advertisement is only displayed when the vehicle reaches a predetermined, and if desired variable, maximum speed, the invention being particularly applicable to underground railway carriages upon which the arrangement is such that when the carriage is traveling quickly through tunnels the advertisement appears at the windows or other suitable position and is retained there during the rapid movement of the carriage but is removed when the train slows down upon approaching a station, and is out of sight while the train is standing in the station, being returned to the window after the train has left the station and acquired the sufficient momentum.

The advertisement is conveniently displayed upon a blind which upon the train or vehicle attaining to the desired speed, is unrolled against the influence of a spring by a system of cords, there being one main operating cord which is pulled or released by the driving means through the medium of the governor. In order to discontinue the pull upon or operation of the main cord after the advertisement has been displayed or removed to thereby prevent overwinding or damage of the mechanism, an escapement is provided in the drive in such a manner that a pull is only imparted to the cord until the blind is completely operated, after which the mechanism is disconnected in so far that it is enabled to retain the blind in the desired position, without however imparting any further movement to it.

Notwithstanding any direction of movement of the train, the mechanism is operated in the proper manner and without incurring breakage or derangement of the parts.

In order that this invention may be clearly understood and more readily carried into practice, reference may be had to the appended explanatory three sheets of drawings, upon which:—

Figure 1 is a front sectional elevation illustrating the frame in which the advertisement is displayed and showing the blind in the withdrawn or rolled up condition. Fig. 2 is a side sectional elevation of the frame shown in Fig. 1. Fig. 3 illustrates the governor mechanism for operating the blind shown in Figs. 1 and 2. Fig. 4 illustrates the escapement mechanism aforementioned. Fig. 5 illustrates a jockey mechanism employed in the mechanism illustrated in Fig. 6. Fig. 6 illustrates, diagrammatically, the method of imparting the initial drive to the governor mechanism.

In a convenient embodiment of this invention and referring firstly to Fig. 1, *a* is the frame in which the advertisement blind is provided and which may be disposed in front of a window or at any other suitable point within the vehicle; the frame *a* is constituted of a back frame in which the mechanism is mounted and a front frame acting as a cover inclosing the various parts. A sheet of glass may be provided both in front and at the rear of the blind.

The blind roller *b* is revolubly mounted upon a revoluble spindle *c* which latter has fixed to it at each end, a pulley *d* to each of which pulleys *d* is secured the one end of a single cord *e* which passes from the pulleys *d* over pulleys *f* and through various hook members *g* provided upon a rod which is disposed in the ordinary manner within the free extremity of the blind. The hook members *g* are adapted to project out at the extremity of the blind and have openings at alternate sides so that the rope *e* may be introduced into the hooks and thus allowed to slide longitudinally to thereby accommodate or compensate for any irregularity in the winding at each side of the blind. The spindle *c* is wound by a main operating cord *h* passing over a pulley h^1 and which upon being pulled rotates the spindle *c* as

also the pulley d so causing the blind to be unrolled through the medium of the cord e. The blind is wound or rolled upon the roller b in a similar direction to which the rope is wound on the pulley d and it will be understood that by this construction upon rotation of the spindle c through the medium of the cord h, the blind is drawn upwardly, the cord e being wound around the pulley d while the blind is unwound from the roller b so causing the two parts d and b to revolve in opposite directions.

In order to return the blind to its unexposed or folded position after same has been unfolded, a helical or other spring i is employed and is attached at its one extremity to the spindle c and at the other extremity to the blind roller b, this spring i being compressed or strengthened upon the unfolding of the blind on account of the opposite rotation of the parts b and c. The main operating cord h is pulled and released by mechanism operated from any convenient moving part as for instance the wheel axle as shown in Fig. 6. Upon said wheel axle a pulley j is provided from which an endless cord or belt member drives a pulley j^1 which latter is connected to or provided on the governor and clutch mechanism hereinafter referred to. The pulley j^1 being mounted upon the vehicle and the pulley j upon the wheel bogie of the vehicle, which it will be understood moves in relation to said vehicle, it is desirable or necessary to employ a system of jockey pulleys k controlled by a spring k^1 which system is more particularly illustrated in plan in Fig. 6. When the bogie wheels move in relation to the vehicle and also the pulley j^1 secured thereto the jockey pulley k through the medium of the spring k^1 automatically guides and adjusts the tension of the belt and so permanently retains said belt in connection with the wheel spindle or the like and the jockey pulley. The system of jockey pulleys comprises a swinging arm pivoted at k^2 and carrying at its other end two pulleys which guide or control the movement of the endless rope. The pulleys k^3 are mounted upon ball bearings and may be separated by a disk k^4 which may be replaced by a new or thicker disk in the event of wear.

The pulley j^1 is provided upon the central or main spindle j^2 of a governor j^3 which acting against the influence of a spring j^4 upon rotation, causes the sleeve j^5 to rise, this resulting in the clutch face j^6 thereon engaging with a similar clutch face l upon a rotatable part l^1 which is mounted in such a manner as to be incapable of any movement other than rotation. Upon the part l^1 is mounted a toothed wheel l^2 which drives a toothed wheel l^3 provided upon a spindle l^4 which carries a small leathern wheel or roller l^5. The leathern wheel or roller l^5 is adapted to engage with a larger leathern wheel l^6 and to drive it, but the wheel l^6 has disposed within its periphery a roller member l^7 which upon coming into engagement in either direction with the roller l^5 results in the drive being discontinued, the roller l^7 then running idly and the wheel l^6 remaining stationary. Secured to a pulley l^9 mounted upon the spindle l^8 of the wheel l^6 is the other extremity of the main cord h by which the blind is operated. The cord or member h may pass along a Bowden sheath h^2 by which means any corners or curves may be conveniently accommodated. The cord h is secured to the periphery of the pulley l^9 at a point corresponding with the point at which the roller l^7 is mounted upon the wheel l^6 as shown in Fig. 4 and the pulley l^9 may be of such dimensions that half a rotation effects four revolutions of the blind spindle which is the amount necessary to complete the unrolling or rolling of the blind. By the blind spring, the roller l^7 is normally retained at the position shown in dotted lines in Fig. 4 but upon the speed attaining to a predetermined limit, the governor engages the clutch, causing the wheel l^6 to rotate in one or other direction through half a revolution thereby operating the blind. Upon the governor releasing the clutch as a result of the slowing down of the train, the roller l^7 returns to its normal position by the spring with the consequent withdrawal of the blind.

While the present apparatus or arrangement has been described as operating a blind it will be obvious that the same may operate a rotating segment or cylinder, a sliding disk or the like or in fact any movable device which suitably displays an advertisement or indication.

What I claim as my invention and desire to secure by Letters Patent is:—

1. In a railway vehicle display apparatus, the combination with a display element and means normally acting to move said element out of a display position, rotary means for moving the display element into a display position and having a rolling stop member for arresting said means at a predetermined point, rotary mechanism for operating said means and including a clutch member, and a governor operated by the running gear of the vehicle and having a clutch member adapted to be moved by said governor into engagement with said first mentioned clutch member to actuate said rotary mechanism, substantially as described.

2. In a railway vehicle display apparatus, the combination with a display element, rotary means for moving said element into a display position and having a rolling stop member for arresting said means, rotary mechanism driving said means and including a clutch member, and a governor device

connected for operation by the running gear of the vehicle and having a clutch member adapted to be moved by said governing device into engagement with said first named clutch member to actuate said mechanism, substantially as described.

3. In a railway display apparatus, the combination with a curtain-like element, rotary means for moving said element into one position and having a rolling stop member for arresting said means at a predetermined time, and governor mechanism connected for operation by the vehicle for actuating said means, substantially as described.

4. In combination with the running gear of a vehicle, a friction wheel driven by the running gear, a curtain-like element for the vehicle, a second friction wheel driven by said first friction wheel for moving said elements into one position, and a revoluble stop wheel on said second friction wheel for engaging the first friction wheel to limit rotation of the second friction wheel, substantially as described.

5. In combination with the running gear of a vehicle, coacting friction wheels driven by the running gear, a curtain-like element for the vehicle driven by one of said wheels, and rolling stop means for engagement with the said wheels to arrest movement of the element driving wheel, substantially as described.

6. In combination with the running gear of a vehicle, coacting wheels driven by the running gear, a curtain-like element for the vehicle operated by one of said wheels, an automatically acting rolling stop means for engagement with said wheels to arrest the element operating wheel, substantially as described.

7. A railway vehicle having running wheels, an element for said vehicle adapted to be moved into and maintained in a display position for a short or prolonged period of time, a normally inoperative device for moving said element into a display position, a device driven from the wheels of the vehicle, governor means for connecting said devices to move and maintain said element in a display position during the running of the vehicle, and means for interrupting the movement of said element at a predetermined point, substantially as described.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

JOHN ALEXANDER KENNEDY-McGREGOR.

Witnesses:
ARTHUR H. BROWN,
F. AUGUSTUS DADY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."