R. J. SCHUHMANN.

ADVERTISING DEVICE.

APPLICATION FILED DEC. 23, 1916.

1,253,537.

Patented Jan. 15, 1918.

2 SHEETS—SHEET 1.

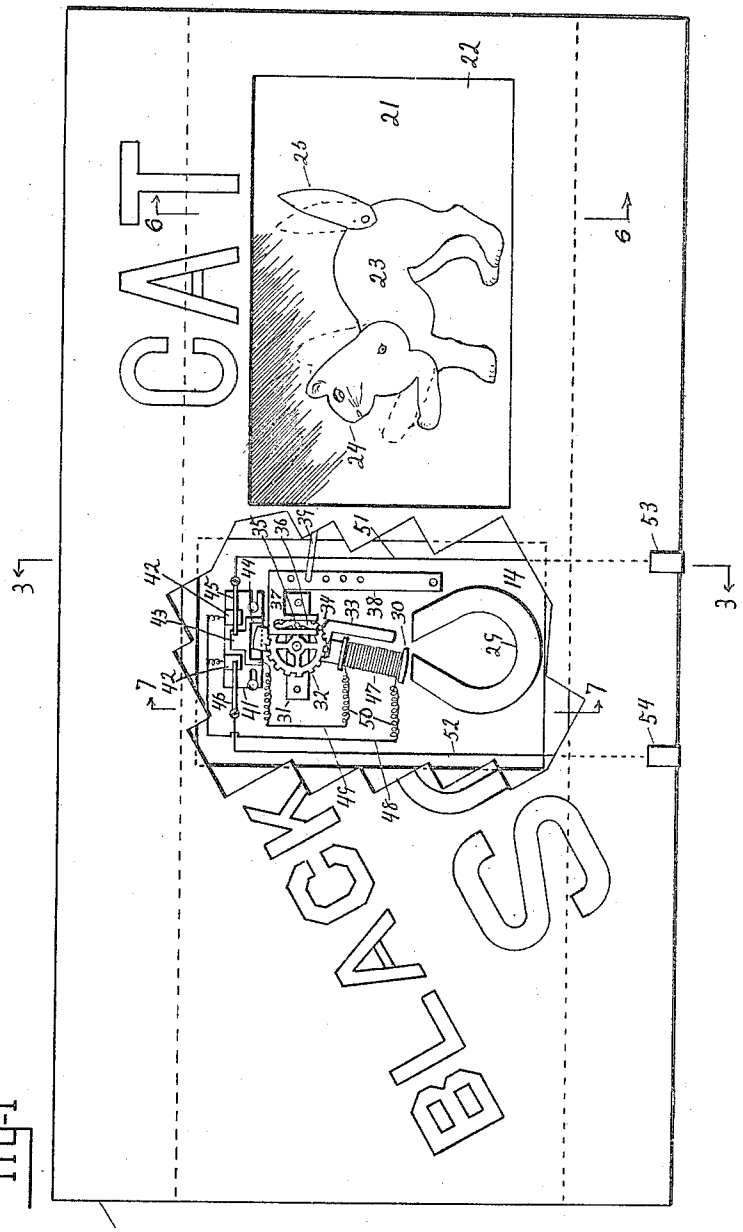


Fig-1

Fig-2

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2 SHEETS—SHEET 2.

Fig-4

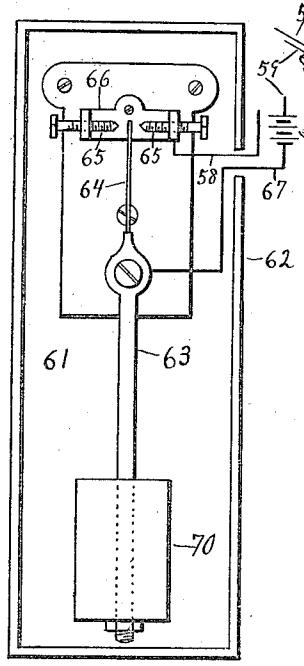


Fig 3

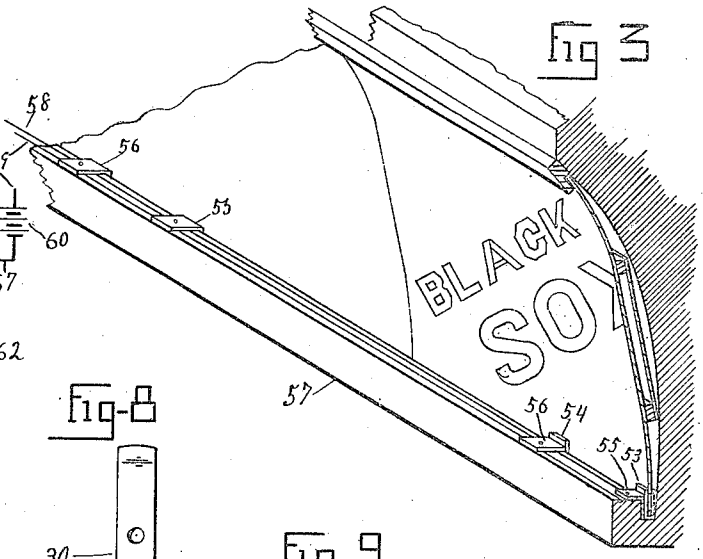


Fig-8

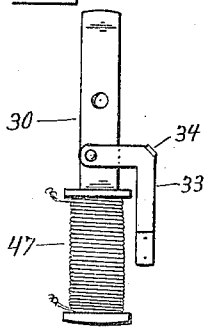


Fig-9

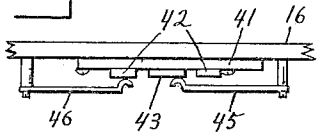


Fig-6

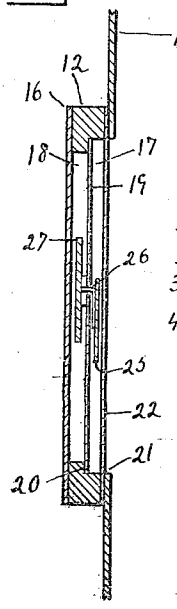


Fig-7

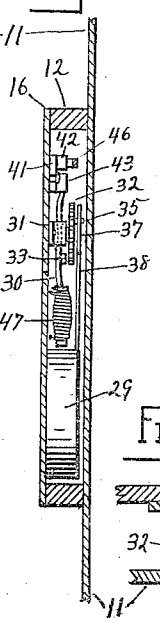


Fig-5

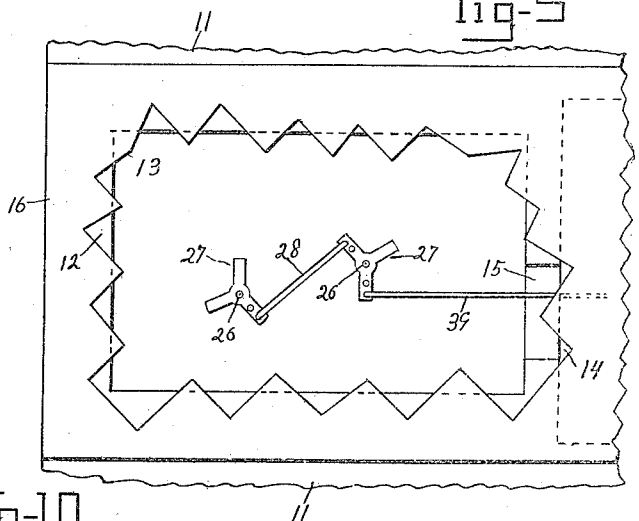
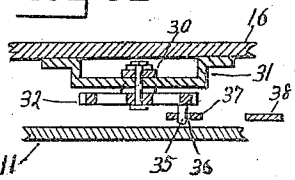


Fig-10



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RICHARD J. SCHUHMANN, OF LOUISVILLE, KENTUCKY, ASSIGNOR OF ONE-HALF TO GEORGE N. BOSLER, OF LOUISVILLE, KENTUCKY.

ADVERTISING DEVICE.

1,253,537. Specification of Letters Patent. Patented Jan. 15, 1918.

Application filed December 23, 1916. Serial No. 138,576.

To all whom it may concern:

Be it known that I, RICHARD J. SCHUHMANN, a citizen of the United States, and a resident of Louisville, in the county of Jefferson and State of Kentucky, have invented a new and Improved Advertising Device, of which the following is a specification.

This invention relates to advertising devices of the class having moving elements associated therewith for the purpose of attracting attention, and more particularly to devices of the character adapted to be displayed in moving vehicles such as street cars.

An object of the invention is to provide a device of the character mentioned in which the moving element will be actuated intermittently.

A further object is to provide in a device of the character described, means whereby the actuation of the moving element is controlled by the variation in the speed of the vehicle.

With the foregoing and other objects in view, the invention consists of the novel construction and arrangement of parts illustrated in the accompanying drawings, which form a part of this specification, wherein is set forth an embodiment of the invention, but it is to be understood that such changes and modifications may be resorted to as come within the scope of the appended claims.

In the accompanying drawings which form a part of this specification, and wherein similar reference characters refer to similar parts in the several views, Figure 1, is a front elevation of an advertising card, or sign constructed in accordance with the principles of my invention, parts being broken away, to show the construction: Fig. 2, is an end elevation thereof: Fig. 3, a sectional perspective of a portion of the cove of a street car, showing a portion of the card in place therein, the section of the car being on line 3—3 of Fig. 1: Fig. 4, is a front elevation of an embodiment of the controlling member: Fig. 5, is a rear elevation of a portion of the card shown in Fig. 1; a portion being broken away to show the construction: Fig. 6, a section on line 6—6 of Fig. 1: Fig. 7, a section on line 7—7 of Fig. 1; Fig. 8, a front elevation of the armature-bar and connected gravity pawl: Fig. 9, a top plan of the commutator, or pole changer: Fig. 10, a section detail.

Referring now to the drawings, it will be seen that the device comprises a panel —11— formed of suitable material having a degree of flexibility, such as cardboard, to the rear face of which a strip of suitable material, such as wood —12— is affixed. This strip extends the full length of the panel in a central zone thereof. Chambers —13, 14— connected by a channel —15— are formed in this strip, the panel 11 forming the front wall thereof, the rear walls thereof being formed by a back —16— of suitable material, such as fiber, or cardboard, applied to said strip. The chamber 13, is divided into two compartments —17, 18— by a partition —19— which rests in a rabbet —20—. A sight opening —21— cut in the panel 11 opposite the forward compartment 18, is closed by a transparent medium —22— such as celluloid. Pictorial representations of objects, or portions of objects designed to attract attention are imprinted on the forward side of the partition 19, complementary portions of said objects are imprinted on separate sections, which are contoured in conformity with the imprint, and movably mounted on the partition in such manner as to present the appearance of completeness to the object, and when actuated to simulate movement thereof. As illustrated a portion —23— of the body of a cat is printed upon the partition and complementary portions *i. e.* the head —24— and the tail —25— are imprinted upon separate sections which are rigidly mounted on pins —26—, which are extended through the partition and rigidly secured to star wheels —27—, the star wheels being connected by suitable means, such as a wire, or rod —28— in such a manner that they, and the movable sections of the figure attached thereto will move in unison either in the same or opposite directions. An electric motor arranged in the chamber 14, comprises a permanent magnet —29— positioned in the lower part of the chamber an armature-bar —30— pivotally suspended from the inner side of an arch bar, or bridge —31— in such manner that its lower end is in close proximity to the poles of the magnet. A tooth wheel —32— is mounted on the outer side of the bridge in axial alinement with the pivot of the armature 30. An L shaped lever, or pawl —33, is pivotally attached, by its shorter limb, to the arma-

ture, with its longer limb extending substantially parallel with the armature, and in such relationship to the tooth wheel that a tooth —34—, which extends outward at right angles from the lever at a point in proximity to the angles thereof, may engage between the teeth of the wheel when the lever moves out from the armature. A pin —35— extended from the face of the wheel 32 is engaged in a slot —36— in an overhanging arm —37— of a lever —38— which is fulcrumed in the lower portion of the chamber. A rod —39— connects the lever 38 with one of the star wheels. It is to be observed that the lever 38 and the arms of the star wheels are provided with a plurality of perforations whereby connections may be made to vary the amplitude of the movement of the movable elements. A commutator or pole changer positioned in the upper portion of the chamber comprises a sliding plate —41— of suitable non-conducting material such as fiber. On this plate a pair of spaced contact blocks —42— are mounted and central between them a third contact block —43— is placed. The contact block 43 is provided with depending legs —44— between which the upper end of the armature bar lies. Suitable contact springs —45, 46— are arranged so that they each make contact alternately with the blocks 42 and 43, one contacting with the central plate 43, while the other contacts with an outer plate 42. A coil —47— of insulated wire is disposed about the lower end of the armature bar and the terminal ends thereof, are connected respectively, the lower terminal by a conductor —48—, with the contact blocks 42, and the upper terminal by a conductor —49 with the central block 43. Conductors —51, 52— lead respectively from the contact springs 45 and 46 to metallic clips or contacts —53 and 54— affixed to the lower edge of the card or panel. Coiled portions —50— of the conductors 48 and 49 exert stress on the armature bar to bring it to a state of rest in the position illustrated, ready to start on the closing of an actuating electric circuit. Contact plates —55, 56— are arranged in spaced relationship along a rail —57—, the lower one in the cove of a vehicle such as a street car, the arrangement being such that the clips on the lower edge of a card will contact therewith when placed in the cove. The contact plates 55, 56 are in electrical contact respectively with electrical conductors —58, 59— which are lead along the rail from a suitable source of current, such as a battery —60—. A controller —61— which is mounted within a suitable container, or box —62— comprises a freely movable member such as a pendulum —63— having a heavy weight or bob —70— on its lower end and on its upper end a contact spring —64— which normally lies between oppositely disposed contact screws —65—, with one of which it is adapted to contact as the pendulum sways in either direction. The contact screws 65 are carried by a plate —66— to which the conductor 58 leads, conductor 59 leading to the battery 60, and a conductor —67— from the battery to a connection with the pendulum at its pivotal point. From the foregoing description it will be seen that whenever the pendulum swings in either direction contact will be made by the spring 64 with one of the screws 65 and the circuit closed, current being given to the armature coil 47 from the battery through the conductor 59, contact plate 56, contact clip 54, conductor 52, contact spring 46, contact block 42, and conductor 48; from the armature coil by conductor 49, contact block 43, contact spring 45, conductor 51, clip 53, contact plate 55, conductor 58 to the contact screw 65 thence through the pendulum and conductor 67 to the battery. The armature thus energized is repelled by the pole of the magnet over which it lies and attracted by the opposite pole. As the armature bar moves the upper end thereof, which lies between the depending legs of the block 43, on the sliding plate 41, shifts said plate and attached contact blocks thus shifting the contact of spring 46 from the block 42 to block 43 and spring 45, from block 43 to block 42, thereby reversing the direction of the current through the armature coil causing it to move back to its first position, this will be repeated as long as the current is closed. During the first described movement of the armature, the long or depending limb of the lever 33, owing to its inertia, will lie against the armature and the tooth 34 will move free of the wheel 32. As the armature returns, the lever 33, owing to its inertia, will lag behind throwing the tooth 34 into engagement with the wheel imparting a partial rotation thereto as the armature moves over. This motion through the connections previously described, is imparted to the moving elements of the sign. The panel, or sign card, is placed in position in the cove of a car by dropping the lower edge of the card behind the lower rail 57, the clips 53, 54 on the card contacting with the plates 55, 56 on the rail, the upper portion of the card is then bent back from the strip 12, and the upper edge slipped behind the upper rail and the card sprung back into place. The controller may be placed in any convenient portion of the vehicle, but in such position relative thereto that the pendulum may swing in the direction of travel. As long as the vehicle is stationary the pendulum will maintain its normal, or vertical position, but when the vehicle starts up, the inertia of the weight, or bob 70, causes it to lag behind, and the spring 64 closes the circuit on screw 65. As long as the speed of the vehicle is accelerating

the weight will lag behind and the circuit will remain closed and the movable elements of the sign will be actuated. When the speed of the vehicle becomes constant, the weight, having acquired the same velocity as the vehicle, will return to its normal position, opening the circuit and thus stopping the moving elements of the sign. When the speed of the car is retarded, as in stopping, the momentum of the weight will carry it forward again causing the spring 64 to close the circuit on screw 65 and starting the mechanism. As soon as the speed becomes constant, or the vehicle comes to a stop, the pendulum will return to its normal position, the circuit be opened and the mechanism stopped. It will be observed that the mechanism is operated and the moving elements of the sign actuated only when the speed of the vehicle is increasing or decreasing and that the moving elements of the sign are quiescent when the speed is constant or the vehicle at rest.

While the mechanism for the purpose described may in accordance with this invention, be varied considerably in the matter of detail, without departure from the essence and spirit of the invention, it is to be pointed out that the arrangement shown is one wherein the number of necessary parts are reduced to a minimum and wherein the assemblage may be quickly and easily performed, and the sign cards readily placed and removed from their position in the vehicle.

Having thus described my invention so that anyone skilled in the art pertaining thereto, may make and use the same, I claim:

1. In combination with a vehicle, sign supporting means, a card sign, a moving element associated therewith, motive means for actuating said element, and means for controlling said actuating means, said controlling means adapted to be actuated by variations in the speed of the vehicle.

2. In combination with a vehicle, sign supporting means, a sign card, a moving element associated therewith, means associated with said card adapted to actuate said element and means for controlling said actuating means, said controlling means adapted to be actuated by acceleration or retardation of the speed of the vehicle.

3. In combination with a vehicle, a sign carried thereby, a moving element carried by said sign, electrically operated means associated with the card and adapted to actuate said element, and means for energizing said motor controlled by variations in the speed of the vehicle.

4. In combination with a vehicle, a sign carried thereby, a moving element carried by the sign, electrically operated means carried by the card and adapted to actuate said element, means for controlling said electrical means, said controlling means adapted to be actuated by the acceleration or retardation of the speed of the vehicle.

5. In combination, a vehicle, a sign card mounted therein, a movable element carried by said card, electrically operated means carried by the card for actuating said element and means removed from the card and adapted to energize said actuating means during changes of speed in the vehicle.

6. A sign provided with a thickened zone having a chamber therein, a moving element carried by said card, means mounted in said chamber adapted to actuate said element, and means for controlling said actuating means, said controlling means adapted to be actuated by variations in the speed of the vehicle.

7. A sign card, having a thickened central zone provided with a plurality of chambers, a moving element mounted in one of said chambers, an electric motor mounted in another chamber and adapted to actuate said element, contact clips on an edge of said card and circuit wires leading from the motor to said clips.

8. In combination, a vehicle having a sign supporting rail, contact plates on said rail, circuit wires leading to said contact plates, sign cards carrying electrically operated mechanism and contact plates on said cards adapted to be placed in contact with the first named plates, said circuit wires leading to controlling means adapted to be actuated by the acceleration or retardation of the car.

RICHARD J. SCHUHMANN.

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