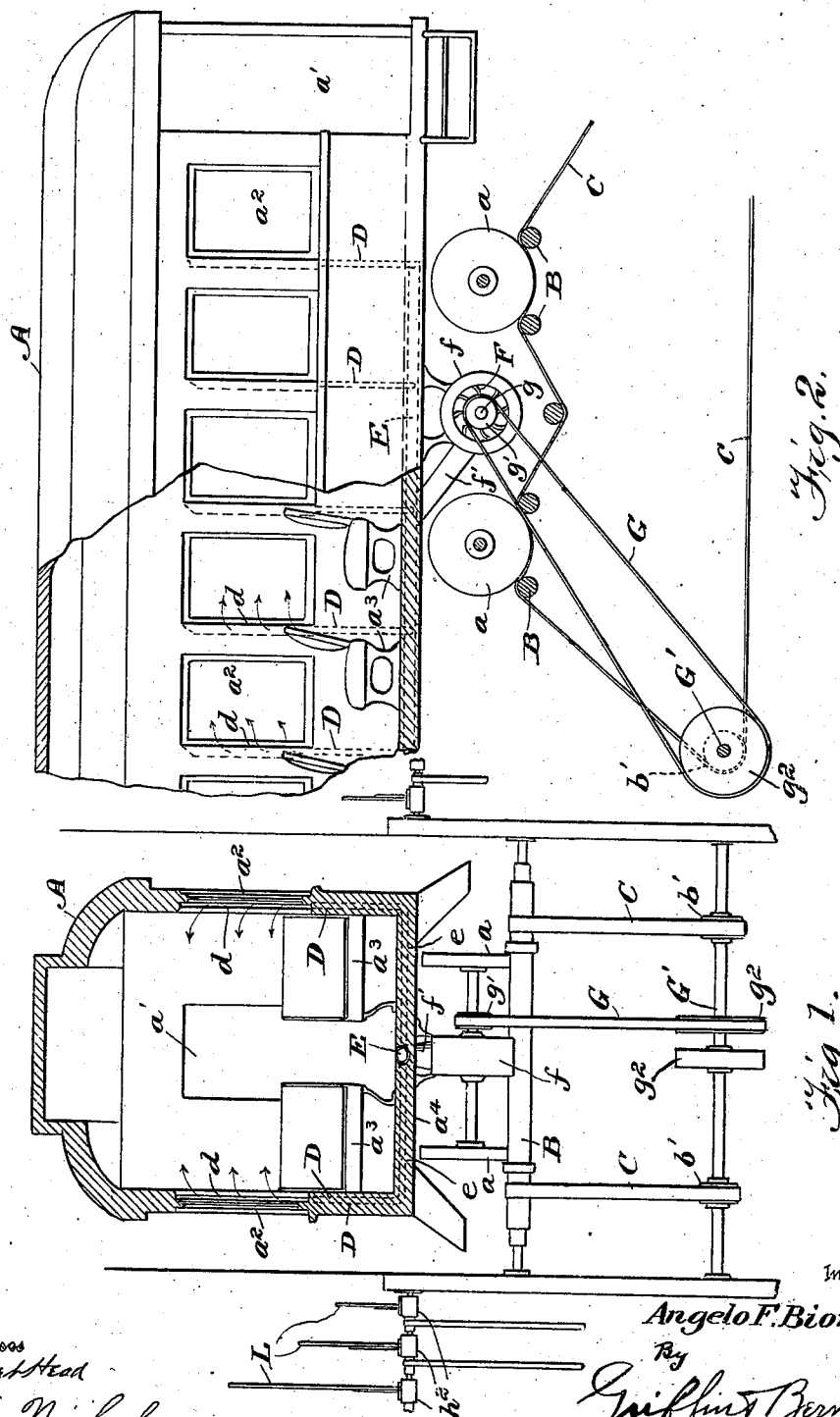


No. 847,725.

PATENTED MAR. 19, 1907.

A. F. BIONDI.
ILLUSION APPARATUS.
APPLICATION FILED MAR. 1, 1906.

2 SHEETS—SHEET 1.



Witnesses
Robert Head
V. E. Nichols.

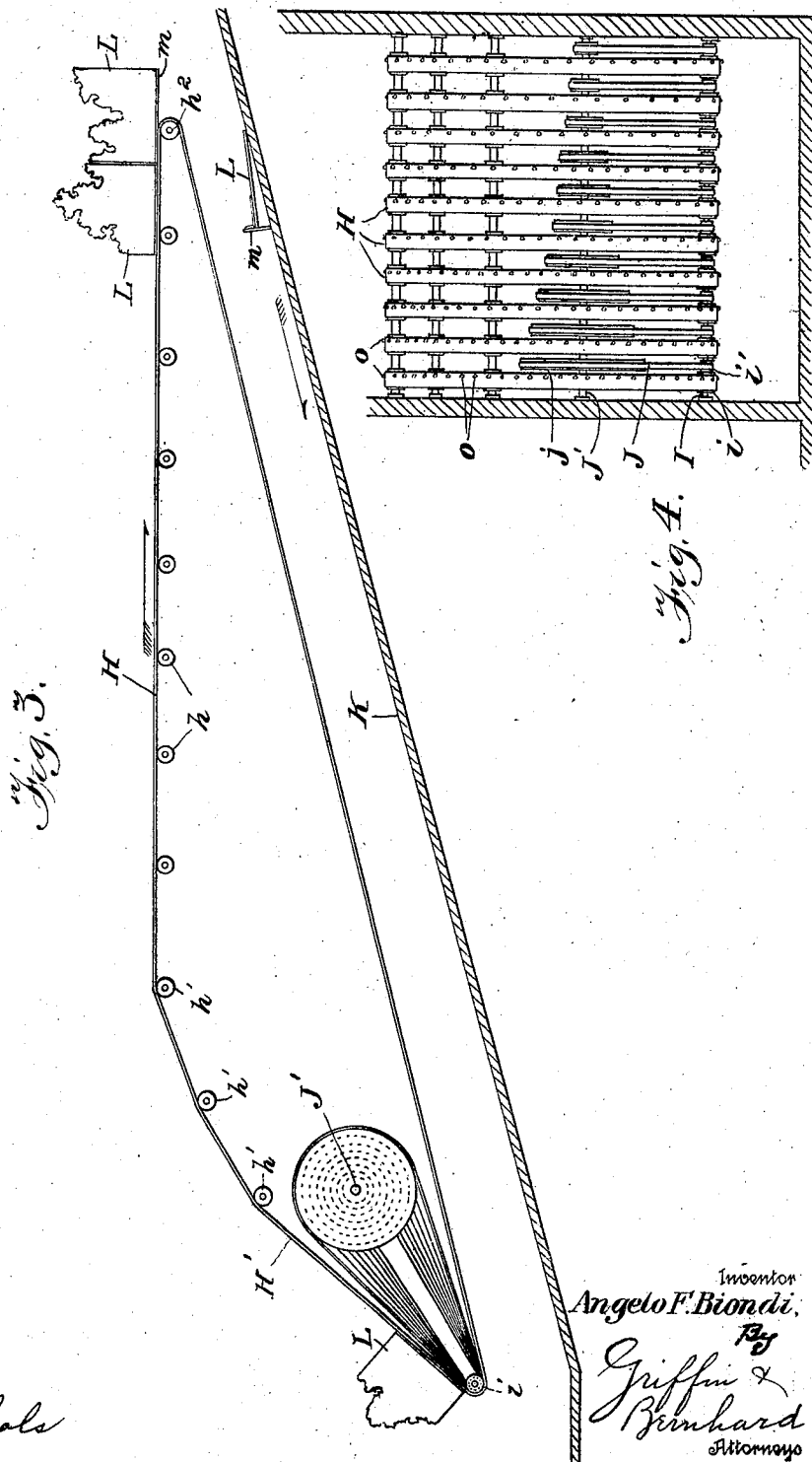
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2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

ANGELO F. BIONDI, OF NEW YORK, N. Y.

ILLUSION APPARATUS.

No. 847,725.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed March 1, 1906. Serial No. 303,590.

To all whom it may concern:

Be it known that I, ANGELO F. BIONDI, a citizen of the United States, residing at New York, borough of Manhattan, in the county of New York and State of New York, have invented certain new and useful Improvements in Illusion Apparatus, of which the following is a specification.

This invention relates to an illusion apparatus of the character disclosed by my prior application, Serial No. 270,810, filed July 22, 1905, wherein a suitable vehicle—such as a car, carriage, or like structure—for the accommodation of passengers is used in connection with scenery adapted to have traveling motion relative to the vehicle for the purpose of giving to the occupants of said vehicle the impression of traveling through rural scenes or through different localities, according to the nature of the scenery employed.

In this invention I employ means for blowing or forcing air into the windows or doors of or against the aforesaid vehicle for the purpose of still further increasing the impression of the occupants that the vehicle is in motion.

My apparatus also provides novel means whereby scenery-panels of the desired nature may be readily supplied to either of a plurality of movable carriers, such panels being moved alongside of the car and thereafter discharged automatically from the carrier or carriers, so as to be returned to the place from whence the panels are supplied to the carriers, whereby the character of the scenery in view from the car may be varied by changing the panels.

In the drawings, Figure 1 is a cross-section, partly in elevation, representing an illusion apparatus constructed in accordance with the invention. Fig. 2 is a view of a car, partly in side elevation and partly in section. Fig. 3 is a diagrammatic view showing one of the scenery-carriers, certain scenery-panels thereon, means for propelling a plurality of scenery-carriers at different rates of speed, and means for returning the scenery-panels to the starting-point. Fig. 4 is a detail view in elevation of a number of scenery-carriers and the driving means therefor.

As shown by Figs. 1 and 2 of the drawings, I employ a vehicle, such as a car A, the same being of usual or any preferred construction.

Said car is practically stationary, except that means are provided for giving a vibrating motion thereto for the purpose of creating the impression on the occupants that the car is in motion. For this purpose the wheels *a* engage with rollers B, which are suitably mounted in appropriate bearings, so as to rotate therein, and said rollers are adapted to be driven by a driving-belt C, the latter being driven from any suitable source of power, such as a line-shaft. The car-wheels *a* engage frictionally with the rollers B for the purpose of driving said wheels, and thus communicating the jarring motion to the car, although it will be understood the car is not driven endwise, because the wheels engage with the rollers in such a way as to prevent the car from having traveling motion. The rollers B support the car in an elevated position in order that the passengers or occupants may have convenient access to the car from a suitable platform. As shown, the car is provided with an entrance or door *a'*, a number of windows *a''*, and seats *a'''* for the accommodation of the passengers.

One of the important features of my invention, as hereinbefore indicated, is the employment of means for directing a blast of air toward or against the vehicle A, and in the embodiment of the invention shown by the drawings this object is accomplished by the employment of air passages or ducts D, one of which is shown by dotted lines adjacent to each of the windows *a''*. Each duct or passage is shown as extending vertically through a side wall of the car, and that part of the duct or passage adjacent to the window has an opening or slot *d*, (see Fig. 1,) which faces toward the window for the purpose of directing the blast or current of air across said window or into the window, whereby the air is blown against the occupants of the seat *a'''* adjacent to the window.

Any suitable means may be provided for compressing the air and distributing the same to the ducts D; but, as shown, I have provided the floor *a''* of the car with a main E, and from this main extends the branch mains *e*, (indicated by dotted lines in Figs. 1 and 2,) whereby the air is supplied from the main E, through the mains *e*, to the upright ducts D. It is evident that instead of forming the mains, passages, and ducts in the

walls of the car I may employ an equivalent construction, such as pipes, properly installed in the floor and side walls of the vehicle.

5 The means for compressing or forcing the air may consist of any mechanism suitable for the purpose; but, as shown, I employ a blower F, of the rotary type. Said blower is inclosed within a casing *f*, which is suspended
10 from the under side of the car-floor, and from this casing leads a wind-trunk *f'*, having communication with the distributing-main E. The blower-shaft *g* is provided with a pulley *g'*, around which passes a driving-belt G, said belt also fitting the pulley *g''* on a driving-shaft G'. This driving-shaft G' is shown by Figs. 1 and 2 as having pulleys *g'*, the latter being of less size than pulley *g''*, for the purpose of driving the belts C, which give
15 rotary motion to the rollers B.

My illusion apparatus also contemplates the employment of moving scenery adjacent to the car or vehicle A. As shown by Fig. 1 of the drawings, the movable scenery is arranged on the respective sides of the car A;
25 but it is evident that the scenery may be used on one side only of the car. The scenery is supported and operated by suitable carriers, herein shown as endless belts H, each belt being long enough to extend lengthwise of the car or a train of cars and to extend into suitable wings (not shown) or other stage appliances, whereby the end portions of each
30 endless carrier H will be concealed from the view of the occupants of the car A. As this concealment of the end portions of the carriers is an obvious expedient which may be resorted to by the skilled constructor, I have not considered it necessary to indicate the
35 means for so concealing the ends of the carrier. Each carrier H runs over suitable idle rolls *h h'*, the rolls *h* being disposed in the same horizontal plane in order to direct that portion of the carrier which moves the scenery
40 within the field of view from the car H in a horizontal path.

The loading portion of the endless carrier H runs over the pulleys *h'*, which are arranged one above the other in the manner shown by
50 Fig. 3 in order to guide or direct said loading portion of the endless carrier in an inclined path, substantially as indicated by the reference character H' in Fig. 3. The carrier runs around an idle roller *h''* at one end, and
55 at its other end said carrier fits on a driving-pulley *i*, the latter being loosely mounted on a shaft I. (See Fig. 4.) The pulley *i* is provided with or made integral with another pulley *i'*, so that the two pulleys *i i'* are
60 adapted for simultaneous rotation on the shaft I, and around the pulley *i'* fits a driving-belt J, the latter being driven by a pulley *j*, which is fast with a main shaft J'.

As shown by Fig. 4, the scenery on one side

of the car is adapted to be carried by a number of endless belts, and these belts are driven individually by the belts J from pulleys *j* on a common main shaft J'. The pulleys *i i'*, associated with each endless scenery-carrier H, are all practically of uniform size; but the pulleys *j* on the main shaft J' are of different sizes, the same being shown as increasing in diameter from one end of the shaft J' to the end thereof. This construction and arrangement of parts enables the
65 belts J to be driven at different speeds by the pulleys *j*, and hence the endless scenery-carriers H will be propelled at different lineal speeds. It is intended that the scenery-carriers H next to the car shall be driven at
70 fast speed, the next scenery-carrier at somewhat slower speed, and so on throughout the series of carriers employed, the carrier which is most remote to the car being driven at the slowest speed.

As shown by Fig. 3, the main shaft J', the pulleys thereon, and the series of driving-belts J all lie within the upper and lower leads of the endless scenery-carriers H, thus disposing the means for driving the scenery-carriers entirely out of the way. Below the
75 scenery-carriers is a chute or runway K, the same consisting of an inclined floor which extends the full length of the apparatus. The high end of this runway or chute is below the
80 idle roller *h''* of the scenery-carriers, while the low end of said runway extends below and beyond the loading portion H' of each scenery-carrier. The runway or chute is thus adapted to receive the scenery-panels as they
85 are discharged from one end of the scenery-carriers and to permit said scenery-panels to return by gravity to the other end of the scenery-carriers below the loading portion H' thereof. Although I prefer to employ the
90 inclined runway or chute for the purpose of returning the scenery-panels to the loading point, it will be understood that I may employ any equivalent construction for this purpose. Each endless scenery-carrier is
95 adapted to be supplied with a plurality of scenery-panels. It is preferred to connect the scenery-panels detachably to each endless carrier; but in the case of some of the carriers the scenery-panels may be attached
100 fixedly to the proper carriers. Each scenery-panel L is provided with a base *m*, and this base is adapted to be interlocked detachably with the carrier. In my prior application I have shown one construction for interlocking
105 the panel-base with the carrier, said base being provided with a plurality of apertures adapted to receive correspondingly-placed projections on the carrier, said projections being indicated at *o* in Fig. 4. The scenery-
110 carrier travels around pulleys on shafts the axes of which are horizontal. This arrangement allows the endless belts forming the

scenery-carriers to lie in a horizontal plane—that is to say, the face of the belt on which the scenery-panel is deposited is horizontal. The base of each scenery-panel rests on and bears firmly upon the horizontally-arranged belts, and said panel is locked to the belt or carrier by the projections thereon fitting into the apertures of the panel-base.

The operation of my invention is as follows: The shaft J' and the shaft G' are driven by a motor or from any suitable source of power. The shaft G' drives the belts C G, so as to rotate the car-wheels *a* and the blower F, and thus giving the jarring motion to the car and the required motion to the blower, the latter operating to force air through the pipes E *e* and the ducts D. The shaft J' operates the belts J at different speeds, so as to drive the pulleys *i* *i'*, and thereby propel the scenery-carriers H at different speeds. Certain of the scenery-carriers may have scenery-panels connected in a substantially permanent manner thereto; but other scenery-carriers are intended to be supplied with scenery-panels which may represent different landscapes—as, for instance, rural scenes, villages, streets, marine views, &c. The panels which are intended to be connected detachably to the carriers H are placed by suitable attendants on the inclined portions H' of said carriers. It is evident that one or more attendants stationed near the pulley *i* may take the scenery-panels and place them by hand on the inclined portions H' of the proper carriers, and said panels will have interlocking engagement with said carriers, so as to be moved across the field of view from the vehicle A. As the panels are moved by the carriers toward the pulleys *h*² the panels will travel around said pulleys for a certain distance and automatically uncouple or disengage themselves from the projections of the carriers. The panels are thus adapted to drop upon the inclined chute or runway K, whereby the panels will slide by gravity toward the place where they are to be loaded upon the scenery-carriers. My invention enables the scenery on each of the scenery-carriers to be changed at pleasure, and the same scenery-panels may be used repeatedly or other panels representing different scenes may be substituted for those which have passed in view of the car A.

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

1. In an apparatus of the character described, a vehicle or car, a movable scenery-carrier adjacent to said car or vehicle, and a plurality of successive disconnected scenery-panels coupled individually to said scenery-carrier, said panels being removable individually from said carrier.

2. In an apparatus of the character described, a vehicle or car, a movable scenery-carrier adjacent thereto, and a plurality of disconnected scenery-panels imposed on said carrier and extending upwardly therefrom.

3. In an apparatus of the character described, a vehicle or car, an endless scenery-carrier adjacent thereto, and a plurality of scenery-panels each coupled detachably to said carrier.

4. In an apparatus of the class described, a car, an endless scenery-carrier running alongside of the car, a plurality of scenery-panels adapted to be moved by the carrier alongside the car, and means for connecting the panels individually and detachably to the carrier, whereby the panels may be fed to one end of the carrier and discharged from the other end thereof.

5. In an illusion apparatus, a vehicle or car, an endless scenery-carrying apron, supporting and driving pulleys for said apron, the axes of said pulleys being horizontal and the faces of said apron being in horizontal planes, and a plurality of scenery-panels movable with the apron, said panels being coupled individually and detachably to the apron.

6. In an illusion apparatus, a vehicle or car, a plurality of endless scenery-carrying aprons, the faces of each apron being in horizontal planes, means for propelling said aprons at different speeds, and a plurality of scenery-panels for each of said aprons, said panels being coupled individually and detachably to their proper aprons.

7. In an illusion apparatus, a plurality of endless scenery-carrying aprons, a plurality of scenery-panels for each apron, said panels being coupled individually and detachably to their proper aprons, and means for propelling the aprons at different speeds.

8. In an apparatus of the class described, a car, a scenery-carrier movable alongside of said car, scenery-panels adapted to be loaded on said carrier at one end thereof and to be discharged from the carrier at the other end, and means for returning the panels to the loading-point.

9. In an apparatus of the class described, a car, and an endless scenery-carrier movable relative to the car, and scenery-panels having detachable interlocking engagement with said carrier, said scenery-carrier having a portion thereof running in an inclined path to facilitate the operation of loading scenery-panels thereon.

10. In an apparatus of the class described, an endless scenery-carrier, and a plurality of scenery-panels adapted to have interlocking engagement with said carrier, an end portion of said carrier being exposed and accessible for loading said panels thereon.

11. In an apparatus of the class described,

an endless scenery-carrier, and a plurality of scenery-panels adapted to have interlocking engagement with said carrier, said carrier at its loading end running in an upwardly-inclined direction.

5 12. In an apparatus of the class described, a plurality of endless scenery-carriers, means for propelling said carriers at different speeds, and scenery-panels having detachable inter-

locking relation with certain of said scenery-carriers.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ANGELO F. BIONDI.

Witnesses:

H. I. BERNHARD,
JAS. H. GRIFFIN.