S. A. ARNOLD.

MECHANICAL BILL BOARD.

APPLICATION FILED MAY 5, 1915.

1,201,913.

Patented Oct. 17, 1916.

3 SHEETS—SHEET 1.

Fig. 1.

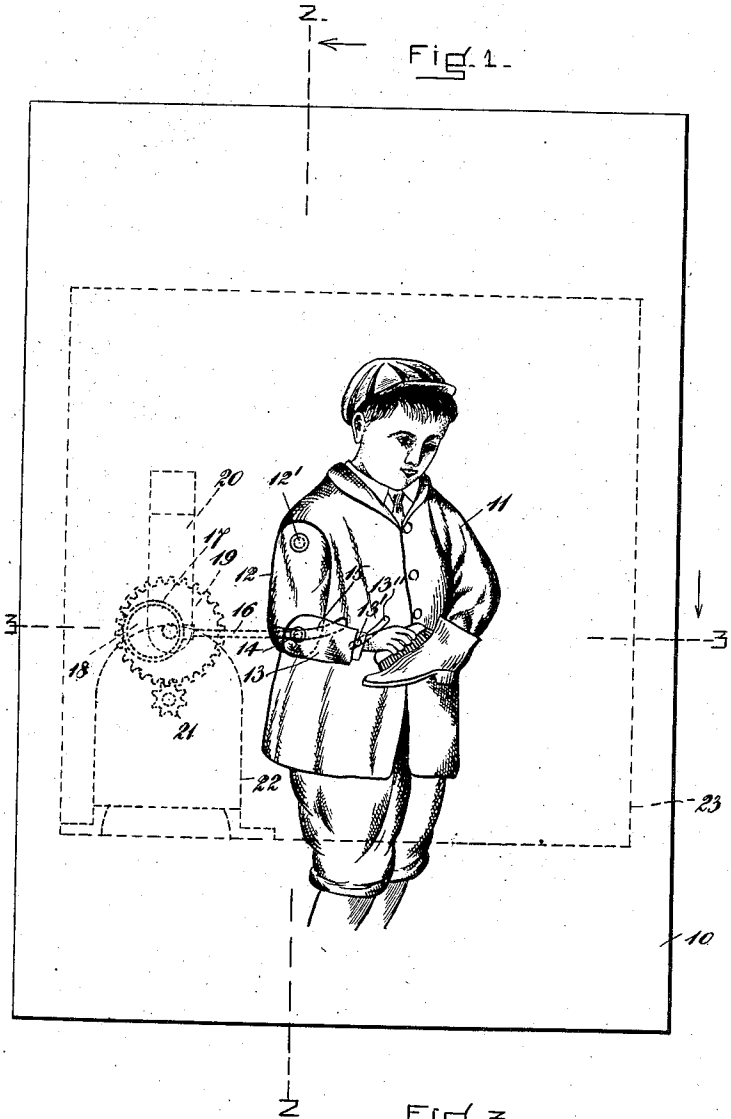


Fig. 2.

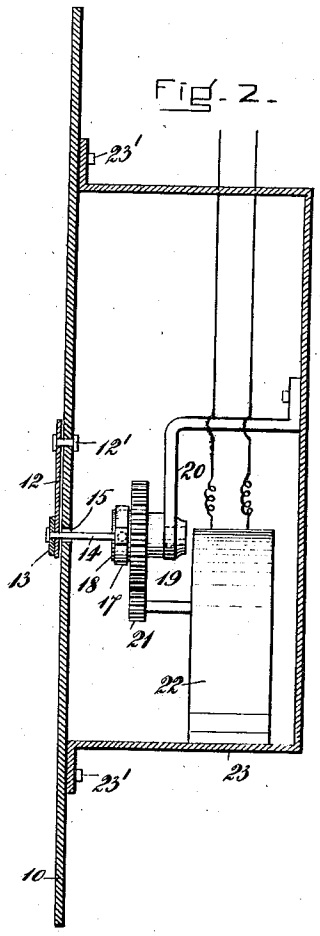
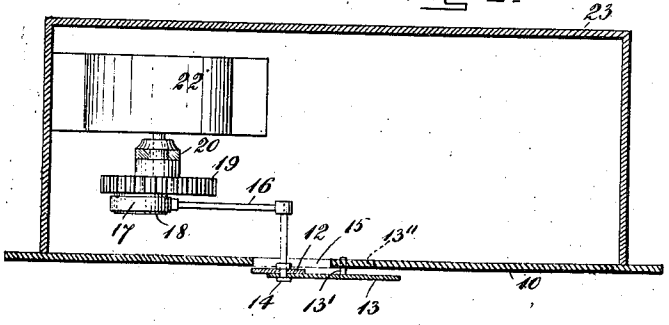


Fig. 3.



INVENTOR:
Sheffield A Arnold
by Browne & Woodward
attys.

S. A. ARNOLD.

MECHANICAL BILL BOARD.

APPLICATION FILED MAY 5, 1915.

1,201,913.

Patented Oct. 17, 1916.

3 SHEETS—SHEET 2.

Fig. 4.

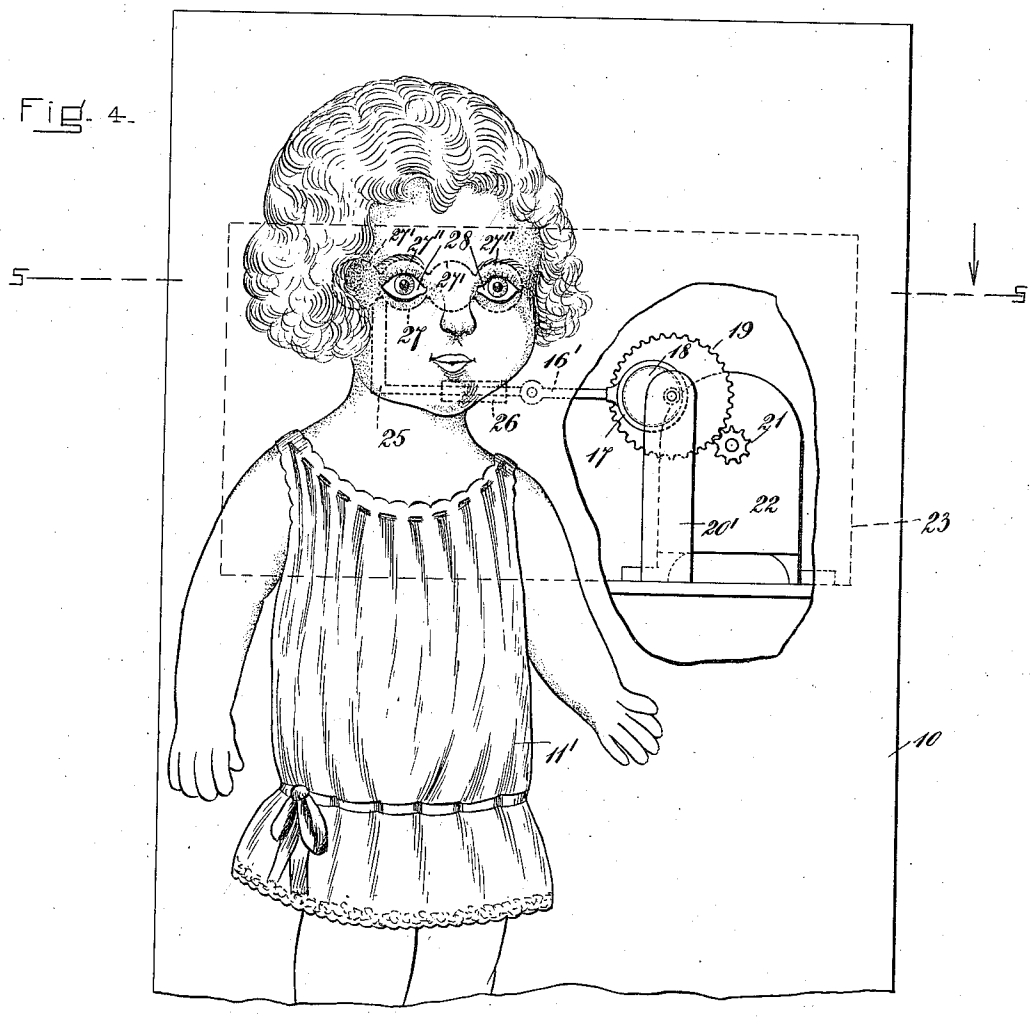
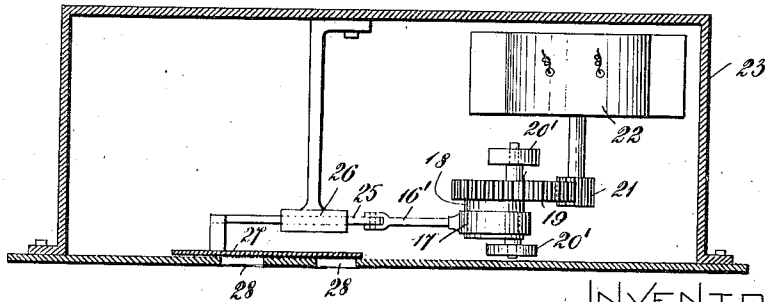


Fig. 5.



INVENTOR:

Sheffield A. Arnold

by Bruce & Woodworth

attys.

S. A. ARNOLD.

MECHANICAL BILL BOARD.

APPLICATION FILED MAY 5, 1915.

1,201,913.

Patented Oct. 17, 1916.

3 SHEETS—SHEET 3.

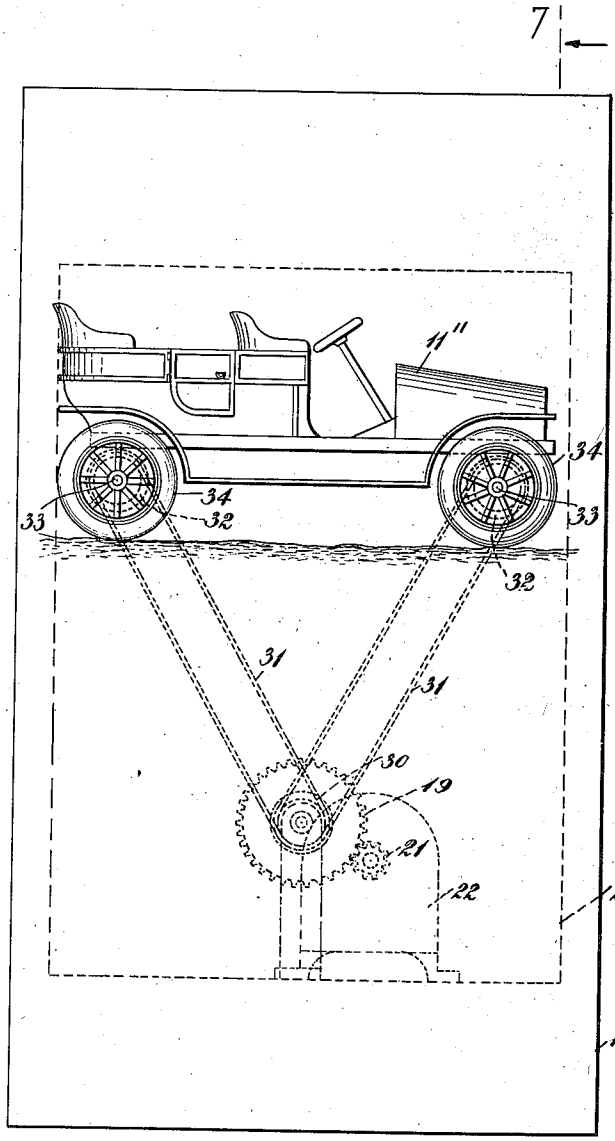


Fig. 6.

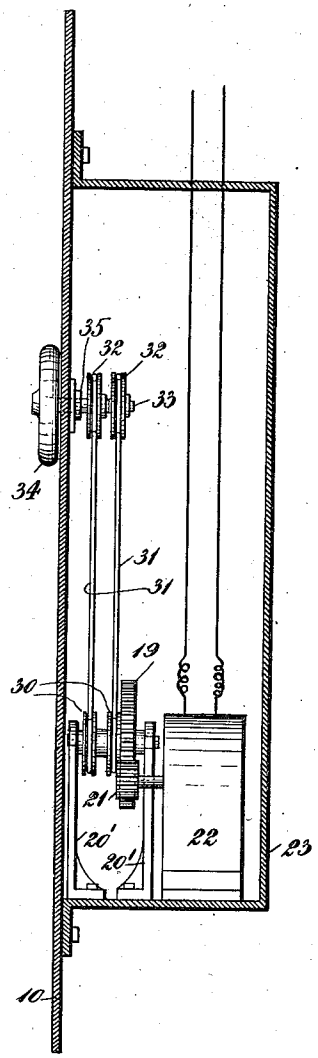


Fig. 7.

INVENTOR:

Sheffield A. Arnold

by Browne & Woodworth

attys

UNITED STATES PATENT OFFICE.

SHEFFIELD A. ARNOLD, OF BROOKLINE, MASSACHUSETTS.

MECHANICAL BILL-BOARD.

1,201,913. Specification of Letters Patent. Patented Oct. 17, 1916.

Application filed May 5, 1915. Serial No. 25,937.

To all whom it may concern:

Be it known that I, SHEFFIELD A. ARNOLD, a citizen of the United States, and a resident of Brookline, in the county of Norfolk and State of Massachusetts, have invented a new and useful Improvement in Mechanical Bill-Boards, of which the following is a specification.

The object of my invention is to provide an advertising device wherein an object or a portion thereof illustrated on a bill-board is given reciprocatory, oscillatory, rotary, or other motion with respect to the bill-board for the purpose of more effectively attracting the attention of the public to the advertisement.

Several illustrative embodiments of my invention are shown in the drawings which accompany and form a part of this specification; but it will be understood that many variations may be made in the particular apparatus illustrated without departing from the principle of my invention.

In the drawings Figure 1 is a front elevation of a mechanical bill-board embodying my invention. Fig. 2 is a vertical section taken on the line 2—2 of Fig. 1. Fig. 3 is a horizontal section taken on the line 3—3 of Fig. 1. Fig. 4 is a front elevation of a modification. Fig. 5 is a horizontal section taken on the line 5—5 of Fig. 4. Fig. 6 is a front elevation of another modification. Fig. 7 is a vertical section taken on the line 7—7 of Fig. 6.

In the particular drawings selected for more fully disclosing my invention, 10 represents a flat surface, such for example as a bill-board carrying an advertising illustration, which may be painted thereon or applied thereto in any manner, as for example, by pasting on said bill-board a paper bill on which said illustration is printed.

In the present instance the bill-board has a portion of a figure of a boy 11 painted thereon and this painted figure is provided with a complementary movable portion consisting, in this particular embodiment of my invention, of a jointed sectional arm of metal or other suitable material, of which the upper arm 12 is pivoted to the bill-board at 12′ and the lower arm 13 connected to the upper arm by a pin 14 passing through a slot 15 in the bill-board and fixed to the pitman 16 which is attached to the strap 17 of the eccentric 18. The gear-wheel 19, to the outer face of which said eccentric is secured, is suitably journaled in a bracket 20 and meshes with a spur-gear 21 of any suitable prime mover, such as the electric motor 22, said motor and bracket being carried by and inclosed within the casing 23 adapted to be detachably secured to the rear of the bill-board by the bolts 23′ or other suitable means.

It will be obvious that the mechanism shown, which of course is merely an example of any one of a great variety of mechanisms suitable for my purpose, will cause the upper arm to oscillate about its pivot 12′ and the lower arm which carries the representation of a brush coöperating with a shoe painted on the bill-board to reciprocate, and the whole structure to give the appearance of a boy polishing a shoe. In order to insure the proper movement of the lower arm, suitable guiding means may be employed, such as the pin 13′ secured to the inner face of said arm and projecting into a slot 13′′ in the bill-board.

Inasmuch as my improved advertising device is intended primarily for application to a bill-board of the ordinary type located as usual on a vacant lot or the roof of a building, it is desirable that the actuating means be a motor of the continuously-operating type, such as an electric motor, which can be started from a distantly-located point and will not require the attention of an operator. The motor and connections whereby motion is transmitted to the movable member of the advertising device must be protected from the elements by a casing, and the casing with its inclosed parts constitutes a portable self-contained means whereby a bill-board of the ordinary type may readily be converted into an animated bill-board.

In that embodiment of my invention shown in Figs. 4 and 5, the gear-wheel 19 has its bearings in the brackets 20′ and the pitman 16′ which is connected with the eccentric strap 17 causes the rod 25 to reciprocate through the guide 26, and thereby move the slide 27 carrying a painted representation of human eyes back and forth across the openings 28, 28 in the bill-board, which, as shown in Fig. 4, are cut out in the shape of eye-sockets. Such oscillation of said slide gives the figure 11′ painted on the bill-board 10 the appearance of moving its eyes, thereby, as above stated, more effectively to attract the attention of the public to the advertisement.

As an alternative, the portions 27′ 27′ of the slide may be painted to represent a pair of closed eyes and the portions 27″ 27″ a pair of open eyes, as shown, in which case the oscillation of the slide produces the illusion of the figure opening and shutting its eyes.

I do not limit myself to pictures of human figures having complementary movable members, or in fact to any particular character of illustration, and as shown in Fig. 6, I may apply the principle of my invention to pictures of inanimate objects. In this particular case, the spindle of the gear-wheel 19, journaled in the brackets 20′ 20′ is provided with pulleys 30, 30 connected by the belts 31, 31 to the pulleys 32, 32 which are secured to the axles 33, 33, respectively, of the rotary members 34, 34 constructed to represent automobile wheels, and the latter by means of the bearings 35 are pivotally connected to the bill-board at the proper points to complete the picture 11″ of an automobile painted thereon. When the motor 22 is energized the members 34 are both caused to revolve in the same direction.

It will be obvious that by means of the present invention there is provided a simple device, inexpensive to construct and economical to operate, whereby the effectiveness of the present system of bill-board advertising is greatly increased by producing moving effects, and that the principle herein briefly disclosed by reference to three embodiments of my invention is capable of practically infinite extension and application.

Having thus described several illustrative embodiments of my invention, without, however, limiting the same thereto, what I claim as new and desire to secure by Letters Patent, is—

The combination with a bill-board having an advertising device represented on one face thereof, of a movable member forming part of said advertising device and supported by said bill-board, means for guiding said member, a casing removably secured to the other face of said bill-board, a motor in said casing, driving connections between the motor and the movable member also supported in said casing independently of the motor whereby the casing with the motor and driving connections can be removed from the bill-board as a unit upon detachment of the movable member therefrom without disengaging the movable member from the board.

In testimony whereof, I have hereunto subscribed my name this 3rd day of May, 1915.

SHEFFIELD A. ARNOLD.

Witnesses:
FREDERICA GOLDE,
RALPH E. SAWYER.