M. ROTHSCHILD.

ADVERTISING MACHINE.

APPLICATION FILED SEPT. 21, 1909.

956,425. **Patented Apr. 26, 1910.**

2 SHEETS—SHEET 1.

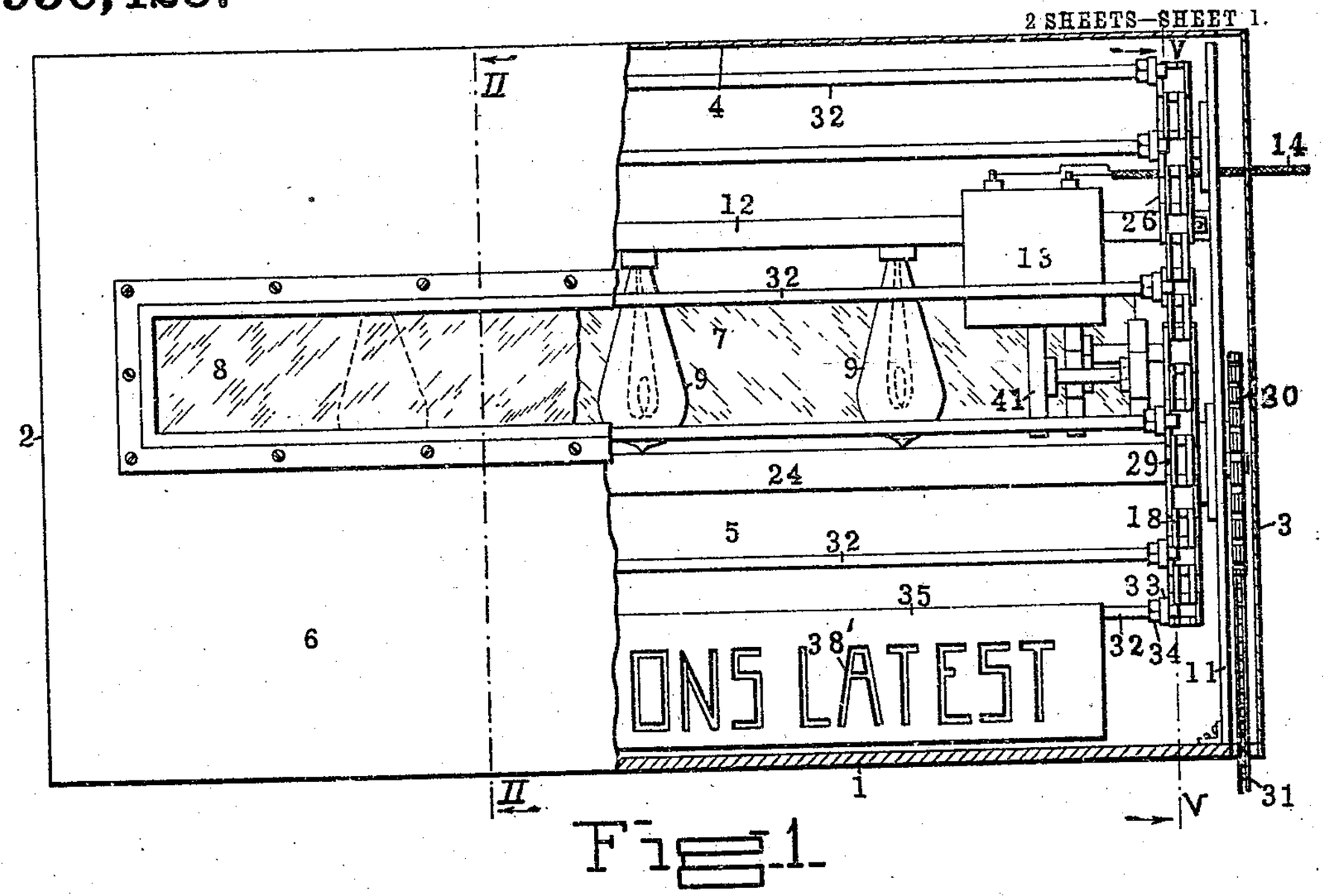

Fig. 1.

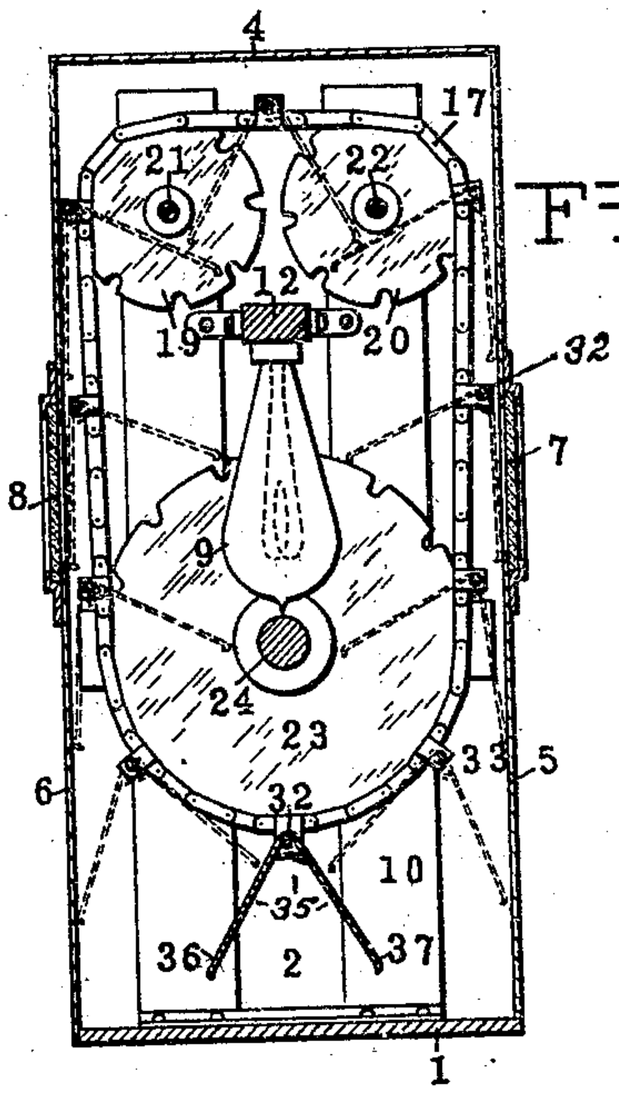

Fig. 2.

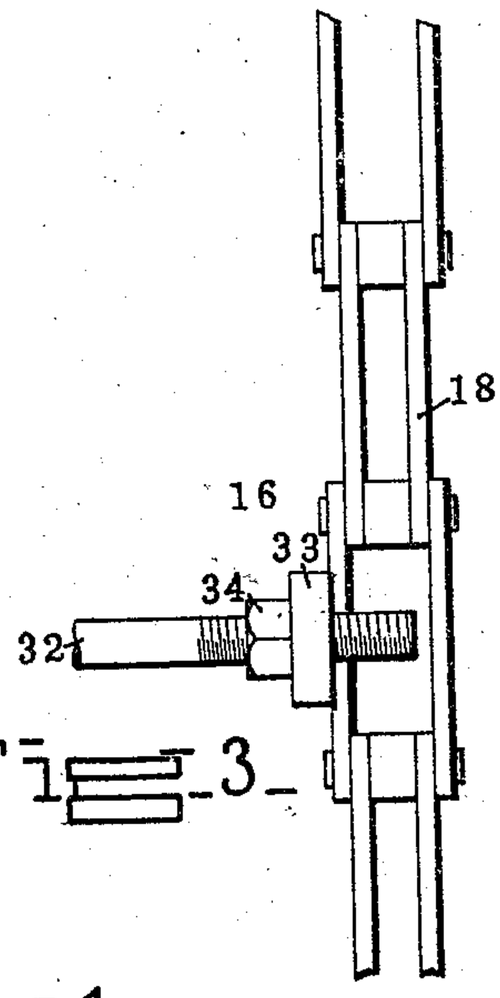

Fig. 3.

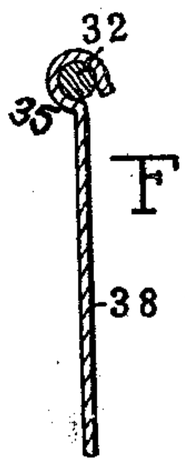

Fig. 4.

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2 SHEETS—SHEET 2.

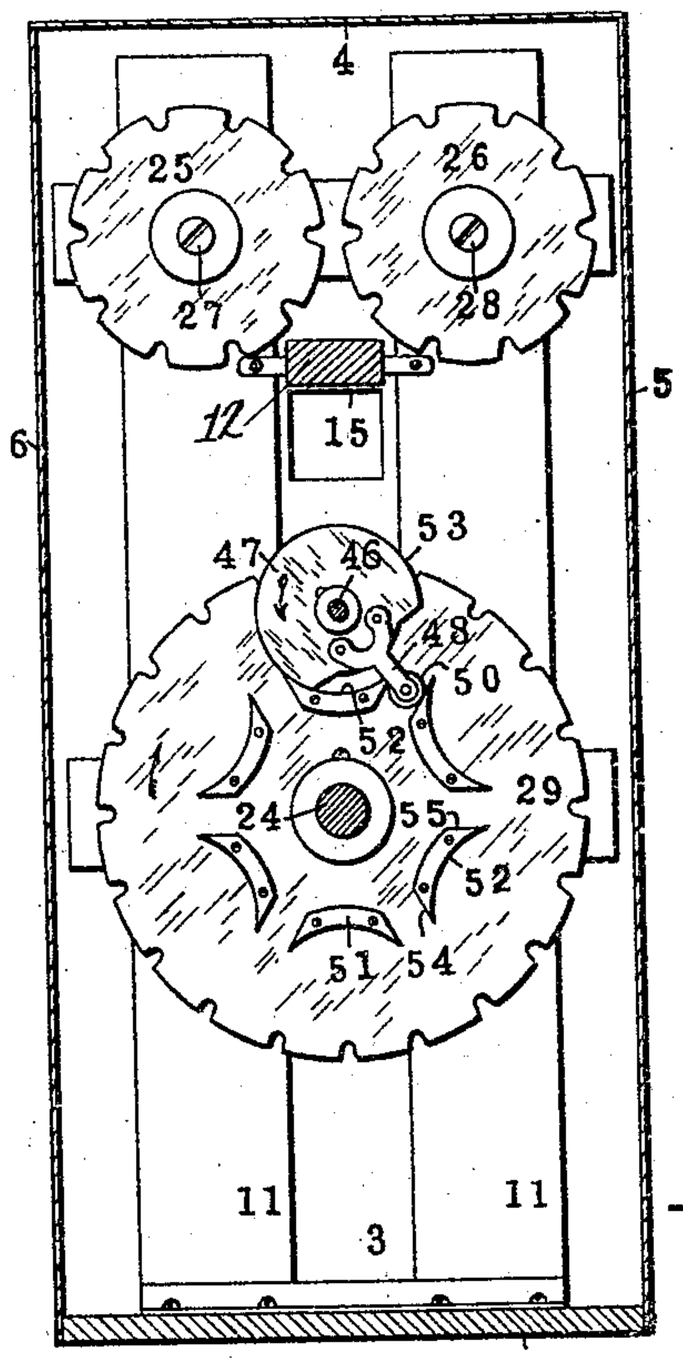

Fig. 5.

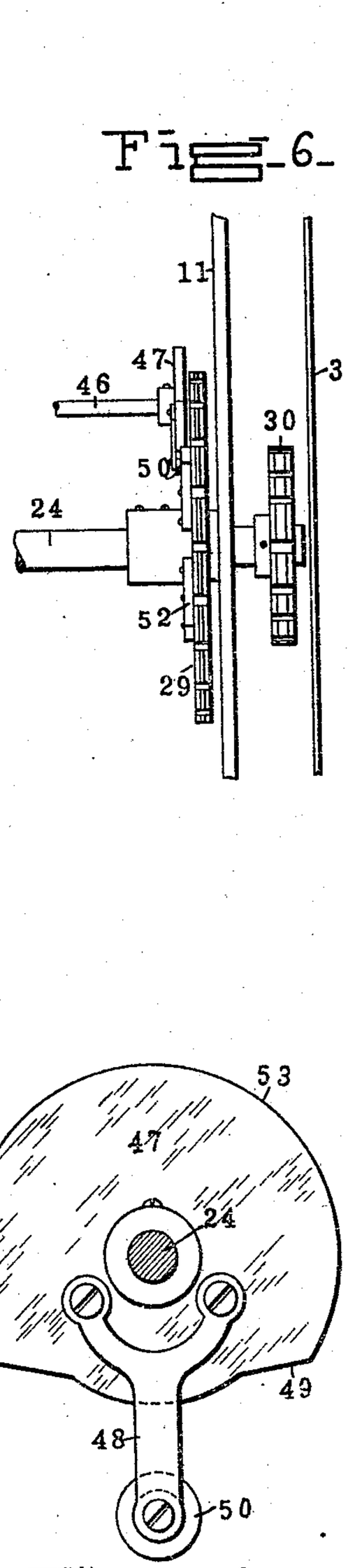

Fig. 6.

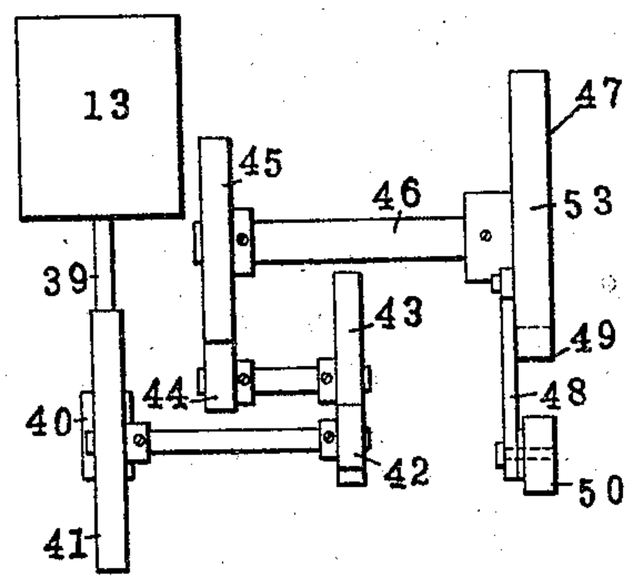

Fig. 7.

Fig. 8.

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UNITED STATES PATENT OFFICE.

MAX ROTHSCHILD, OF NEW YORK, N. Y.

ADVERTISING-MACHINE.

956,425. Specification of Letters Patent. Patented Apr. 26, 1910.

Application filed September 21, 1909. Serial No. 518,744.

To all whom it may concern:

Be it known that I, MAX ROTHSCHILD, a citizen of the United States, and a resident of the borough of Manhattan, county, city, and State of New York, have invented certain new and useful Improvements in Advertising-Machines, as set forth in the following specification.

This invention relates to exhibiting apparatus and especially that adapted for advertising purposes.

An object of the present invention is to provide for the unobstructed rear illumination of each of a pair of transparency plates suspended from the same suspension means and so that one is illuminated on one side of an internal source of light and the other is illuminated on the other side of said internal source of light.

A further object of the invention is to combine such an arrangement of transparency plates and suspension means with a suitably driven carrier frame.

Further objects of the invention are to improve in general the construction of apparatus of the class described and will be apparent from the following specification and claims, both of which should be read in connection with the accompanying drawings, which form part of this application, in which like characters designate corresponding parts, and in which,—

Figure 1 is a front elevation of the apparatus with a portion of the front wall removed; Fig. 2 is a cross section through line II—II of Fig. 1 looking in the direction of the arrows; Fig. 3 is a detail front elevation of a portion of the traveling frame; Fig. 4 is a detail sectional view corresponding to Fig. 2, but showing a modification of a display member; Fig. 5 is a sectional view through line V—V of Fig. 1 looking in the direction of the arrows but with the traveling frame removed; Fig. 6 is a fragmentary front elevation of parts shown in Fig. 5; Fig. 7 is a diagrammatic showing of the mechanical connections for the motor; and Fig. 8 is a detail side elevation of the disk segment with its tooth member.

A suitable casing is provided, as by means of the base 1, end pieces 2 and 3, top 4, and removable front and back walls 5 and 6. The walls 5 and 6 are provided with suitable display openings formed by windows 7 and 8 oppositely positioned and between which may be located a suitable source of light such as the electric lights 9.

The movable display apparatus may be supported within the casing in any suitable manner as by the end frames 10 and 11 which also serve as means for supporting the stringer 12 from which the electric lamps 9 depend and for supporting the motor 13, which together with the lamps 9 may be constantly energized from any suitable source of power which may be introduced by suitable conductors 14 through the opening 15.

A traveling frame 16 for carrying independently removable display members is provided within the casing and comprises a pair of endless chains 17 and 18 maintained in parallel relation by suitable sustaining means. In the embodiment shown the chain 17 is sustained by sprockets 19 and 20, journaled by means of studs 21 and 22 to the frame 10, and by means of the lower sprocket 23 carried by the drive shaft 24 suitably journaled in the frame 10. The endless chain 18 is sustained by similar sprockets 25 and 26. The sprockets 25 and 26 are pivotally mounted on the frame 11 by studs 27 and 28 and the lower sprocket 29 is fixed to drive shaft 24 journaled at this end in frame 11 and extending therethrough to accommodate the sprocket 30 which is fixed to the projecting end of the shaft 24 to accommodate a chain 31 suitable for driving a second advertising unit like that illustrated.

The endless chains 17 and 18 are cross connected, at suitable equal intervals, to complete the frame 16, by suspension bars 32 occupying a horizontal position and arranged to travel upwardly across window 7 and downwardly across window 8. Each bar may be secured to the respective chains by threaded engagement with lugs 33 secured to or formed on suitable links of the chains. Lock nuts 34 may be employed to hold the suspension rods 32 firmly in place, although it is to be understood that the suspension bars 32 may be mounted in any suitable manner.

Figs. 1, 2 and 4 clearly illustrate the display members suspended from and swinging from the various suspension rods 32. In these figures the display members 35 comprise two plates 36 and 37 each of which may be suitably provided with cut out or transparent portions 38′ so shaped as to in-

dicate the desired advertising legend or illustration. The plates 36 and 37 are arranged to diverge downwardly and are suitably connected one with the other when suspended from the rods 32 so that when one plate such as 36 is brought against the window 8 the other plate 37 extends out in a direction away from the window 8 to permit the unobstructed rear illumination of the plate 36 by the lamps 9. In like manner when the plate 37 is brought before the window 7 the plate 36 is swung up so as to clear the path for the passage of light. The walls 5 and 6 serve as ways for deflecting the plates 36 and 37 and serve to hold the plate before the window vertical, although other ways could be used. It is however, to be understood that for some purposes a display member in the form of a single depending plate 38 (see Fig. 4) may be employed and is so formed as to hang freely from the suspension rods 32. It is further to be understood that the invention is not limited to display plates bearing perforations or transparent portions and known as transparencies, because opaque display plates bearing suitable characters on their faces (one or both sides) are serviceable for all purposes where illumination through the plates is not desired.

The motor 13 serves as the source of power for causing the travel of the frame 16. Its shaft 39 is shown in diagram in Figs. 1 and 7 connected by means of the worm 40 with spiral gear 41 which through the train of gears 42, 43, 44 and 45 imparts a rotary movement to the shaft 46 suitably journaled parallel to the drive shaft 24. An intermittent gear connects shaft 46 with frame 16. Fixed to the shaft 46 is a disk segment 47 provided with a tooth member 48 extending radially and symmetrically from the flattened portion 49 of the disk segment 47. This member 48 is provided with a tooth shown in the form of a roller 50 occupying the same plane as the disk segment 47.

To coöperate with the disk segment and its tooth member are provided a plurality of spaced cams 51 rigidly secured relatively to the shaft 24 and in the same plane. In the present embodiment they are shown six in number and secured to the inner face of the sprocket 29 although this expedient is merely for the reduction of the number of parts, any suitable carrier fixed to the shaft 24 being serviceable for the attachment of the cams 51. Each cam 51 is provided with a concave face 52 corresponding in curvature with the convex circular face 53 of disk segment 47. Each cam 51 is also provided with a pair of oppositely positioned cam faces 54 and 55 arranged to coöperate with the roller 50. The cams 51 are symmetrically positioned about the drive shaft 24 and are so located that when the circular face 53 of disk segment 47 is in locking engagement with the concave face 52 of one of the cams 51 the traveling frame 16 is so positioned that one of the display members will be held opposite the window 7 and another opposite the window 8 and so on for each succeeding cam 51.

In Fig. 5 the parts are illustrated in their relative positions in which the roller 50 is just leaving a cam face 55 and the circular face 53 of segment 47 is moving into locking engagement with the concave face 52 of the uppermost cam 51. This locking engagement continues until the roller 50 is rotated nearly a complete rotation to engage the cam face 55 of the uppermost cam 51, illustrated in Fig. 5, whereupon the sprocket wheel 29 is stepped around with a quick movement one-sixth of a rotation in the direction of the arrow. This causes the display of succeeding display members in an obvious manner and is repeated continuously to impart intermittent movement to frame 16. Should the direction of rotation of motor 13 be reversed, the roller 50 would engage the cam faces 54 instead of the cam faces 55 to effect the travel of the frame 16 in the opposite direction from that described. In any event both cam faces of every pair of cam faces 54 and 55 between which the roller 50 passes may be operatively effective, one to effect the advance of the frame 16 and the other to prevent too great a movement and to insure the registration of the circular face 53 with the concave locking face 52.

For purposes of economy it is contemplated that it may be desirable to gear one or more advertising units such as that described together so that all may be driven by a single motor 13 in one of the units. In this event the units may be super-posed in an obvious manner and interconnected by means of a chain 31 connected with sprockets 30, it being understood that the motor and motor gear may be omitted for all of the units except one.

It is to be understood that the display members may be changed, replaced at will so that any desired succession of indications may be given to be received from both the front and the rear of the machine or, by omitting one window, only from the front or rear.

A satisfactory embodiment has been illustrated to disclose the invention but such embodiment is merely illustrative.

What is claimed and what is desired to be secured by United States Letters Patent is:—

1. In exhibiting apparatus, a source of light; suspension means; means for causing said suspension means to travel about said source of light; display means comprising two transparency plates suspended from said suspension means and having a tend-

ency to depend so that one plate would obstruct the illumination of the other; and means operative on each of two opposite sides of said source of light upon said display means to cause one transparency plate to swing up and clear the direct path of the rays of said light to the other transparency plate.

2. In exhibiting apparatus, a casing providing opposite walls having opposite display openings respectively; a source of light located between said openings; a horizontal suspension rod; means for causing said rod to travel up across one opening and down across the other opening; display means comprising two transparency plates swingingly suspended from said suspension rod and mutually connected so as to diverge from one another so that unobstructed rear illumination of the respective plates, each in turn may be had when positioned respectively before a display opening.

3. In exhibiting apparatus, a casing providing opposite upright guiding walls each having a display opening; a source of light located between said openings; a horizontal suspension rod; means for causing said rod to travel up across one of said openings and down across the other said opening; display means comprising two transparency plates swingingly suspended from said suspension rod and mutually connected so as to diverge from one another at an angle approximating 90°, whereby each of said transparency plates in turn engages one or the other of said guide walls to swing its companion transparency plate upwardly to cause the unobstructed rear illumination of the transparency plate engaging said guide wall.

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

MAX ROTHSCHILD.

Witnesses:

CHRISTINE E. HAUSELMANN,

LEONARD DAY.