

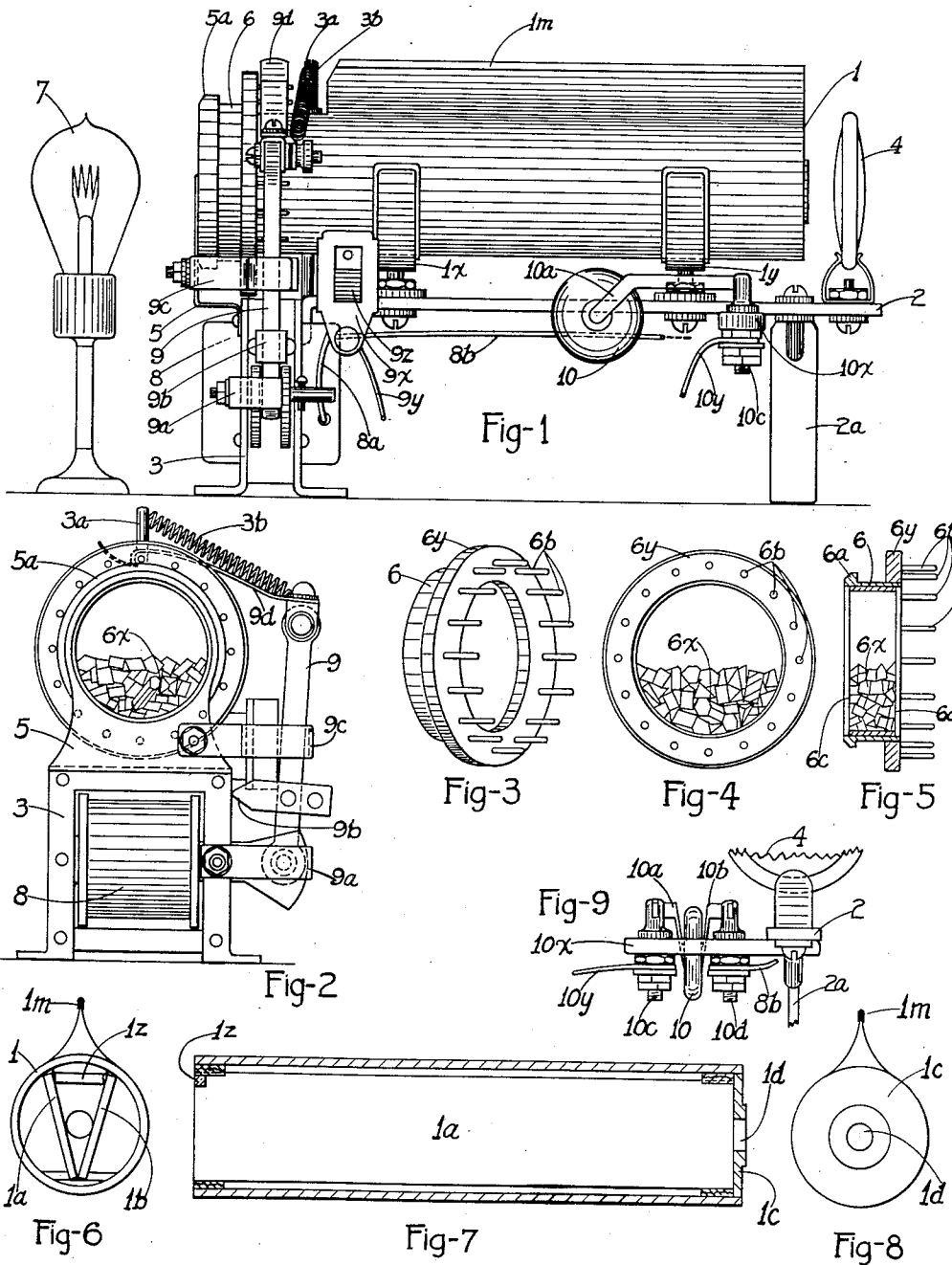
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ELECTRO-AUTOMATIC ADVERTISING MACHINE

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ELECTROAUTOMATIC ADVERTISING
MACHINE

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2 Claims. (Cl. 88—24)

My invention relates generally to electric advertising machines and specifically to those electric advertising mechanisms that automatically and intermittently change one or more features of the advertising display that may be projected upon a distant screen. And the principal object of my invention has been the designing and development of an automatic advertising machine at a reasonably low cost in production and adapted to project upon a distant advertising screen, intermittently and automatically an endless series of different mathematically symmetrical forms of an endless variety of different colors. Another object of my invention has been to design a transparent circular kaleidoscopic magazine adapted to be rotated automatically and intermittently by means of electric or other motive power. Another object of my present invention has been the production of a reflector-cylinder adapted to catch the various colors of light shining through the various colored gems in said rotary magazine and to throw them through a magnifying lens to fall upon a distant screen in various symmetrical forms. Other objects of my invention will be disclosed in the progress of this specification.

The foregoing objects have been attained in my instant invention; and my new and useful electro-automatic advertising machine illustrated in the accompanying drawing forming a part of this specification is a practical device embodying the aforesaid novel means and other new and useful details of construction, arrangement and combination of parts all of which together with their functions will be described with reference to said drawing; and will be definitely pointed out in the claims that follow this description, so that any person skilled in the art may be able to construct and use this invention.

In said drawing:

Fig. 1 is an elevational view of the side of my electro-automatic advertising machine, showing the relative position of said reflecting cylinder and various other parts of said advertising machine in their normal service position, including the conventional electric light.

Fig. 2 is an elevational view of the rear end of said device with the electric light bulb removed, to show a full view of the rotary magazine and its circular journal and also, of the solenoid and a part of its armature and the oscillating arm, attached thereto.

Fig. 3 is a perspective view of the transparent rotary magazine in which the various colored transparent gems are visible. In this Fig. 3 are

also shown a plurality of feed-pins adapted for use in rotating said magazine.

Fig. 4 is an elevational view of the backside of said rotary circular magazine removed from the journal in which it rotates and showing the relative amount of colored transparent gems resting loosely therein between the circular glass-back and the circular glass-front, fastened therein.

Fig. 5 is a cross sectional view of said circular rotary magazine, cut through the center thereof, to show the relative thickness of said magazine and the thickness of the glass-front and the glass-back thereof.

Fig. 6 is an elevational view of the rear end of said reflecting cylinder, showing the V shape of the assemblage of the reflecting glasses fastened therein, and further showing the relative position of the small oblong rectangular piece of colored glass set in between the reflecting mirrors at the upper edges thereof.

Fig. 7 is a longitudinal sectional view of said reflecting cylinder, showing one of the oblong rectangular glasses fastened therein silvered and lacquered on the inside thereof, and adapted to reflect a straight-lined image therefrom.

Fig. 8 is an elevational view of the opaque circular cap fastened on the front end of said reflector-cylinder and provided with a comparatively small circular opening therethrough at the center thereof.

Fig. 9 is an elevational view of a fragment of the front end of the advertising machine, including the upper portion of the supporting post, and showing the two insulated binding posts and the two flexible metal strips connected therewith, between which the conventional intermittent switch is supported in service.

This invention has been designed and experimentally developed in its details of construction for the purpose of producing at a fairly low cost a durable, useful and attractive electro-automatic advertising machine adapted to project upon a distant screen an endless series of different symmetrical forms in a variety of different colors. And with this purpose and the special objects aforesaid in view, I will now describe my invention more fully in detail, pointing out the new and useful features of the construction and the operation of the individual parts and the combinations thereof, as illustrated in the drawing hereinabove described, in which similar letters and characters refer to similar parts throughout the several views.

In the invention and development of my new electro-automatic advertising machine for pro-

jecting upon a distant screen a multiplicity of different symmetrical forms of a diversity of attractive colors, I have designed in a reflector-tube 1 an arrangement of two plane, oblong rectangular reflecting mirrors 1a and 1b rigidly fixed longitudinally in the reflector-tube 1 with their lower edges set contiguous and the upper edges set 30 degrees apart, the same being one-twelfth part of 360 degrees, an entire circle, to produce in the reflections of said mirrors twelve equal images of one image received therein. These two reflecting mirrors are silvered and lacquered on their inner adjacent sides, so that they reflect received images only in straight lines, with no refractions; and over the outer end of the reflector-tube 1 I have fastened an opaque cap 1c provided with a comparatively small circular opening 1d at the center thereof. The object of said opaque cap and its small opening 1d is for the purpose of shutting off the excessive light from the electric light bulb 7, shown in Fig. 1, whose rays pass through the kaleidoscopic magazine 6 and on through the reflector-tube 1 between the reflecting mirrors 1a and 1b thereof and are thus shut off from the edges of the magnifying lens 4 and confined to the central portion thereof to be projected upon a distant screen. And in that projection on the distant screen will appear twelve oblong rectangular border sections of colored light around said projection; said border sections of colored light being caused by the oblong rectangular piece of colored glass 1z installed in the rear end of said reflector-tube, shown in Fig. 6, between the upper edges of said reflecting mirrors. The magnifying lens 4, shown in Figs. 1 and 9, is installed in a vertical position with broadside to the small circular opening 1d and concentric therewith, at a distance therefrom depending upon the size and the distance of the screen for each advertising display.

The reflector-tube 1, shown in Fig. 1, I have installed in the spring-clamps 1x and 1y, mounted on a rigid rail 2 extending along under said tube the length thereof; the outer end of said rail being supported by means of a vertical post 2a rigidly fastened to the outer end of the rail and resting on the baseboard of the advertising machine. The inner end of said rail is fastened to the upper part of the metal frame 3, which not only encloses the solenoid motor 8, but also affords a stable support for other important parts of my invention.

Mounted on the metal frame 3 is a bracket 5, and on the upper edge of said bracket is installed a circular journal 5a and on the front or outer side of said journal the circular rotary kaleidoscopic magazine 6 is rotatably installed. The smooth circular projection 6a, shown in Figs. 3 and 5, on the backside of said magazine fits rotatably in said journal, and the plurality of feed-pins 6b that stand out a predetermined distance from the front side thereof to help rotate said magazine are shown in Figs. 3 and 5. The magazine 6 I have provided with a circular transparent glass back 6c and a circular transparent glass front 6d installed therein a predetermined distance apart, as shown in Fig. 5. And in the circular space between said back and said front circular glasses, I have deposited a plurality of colored glass gems 6x, not merely pieces of broken colored glass, but crystal glass gems, each having many highly polished facets on the surface thereof. These gems I have deposited in said space loosely, so that, as said magazine is

rotated, the gems fall promiscuously over one another in irregular movements, throwing a great variety of colored lights into the reflector-tube 1 from the electric light stationed just behind the magazine 6 in line with the axis of the reflector-tube 1 and shining through said gems. These colored rays of light are reflected as they pass through the tube 1 between the reflecting mirrors 1a and 1b to fall upon the central portion of the magnifying lens 4, forced to that area by means of the opaque cap 1c with its small central circular opening 1d to pass through said lens and be projected for advertising attraction on a distant screen.

The solenoid motor 8 enclosed in the metal frame 3, I have provided with a reciprocating core adapted to slide inwardly when the motor is energized and allowed to slide outwardly when the motor is not energized. And on the outer end of said core I have fastened the lower end of the long vertically-disposed arm 9, in a pintle-hinge joint. And on the lower part of said metal frame I have fastened a sheet-metal bracket 9a opposite said motor-core, bending said bracket over in a right angle far enough to prevent said core from coming out of said motor only a predetermined distance. And on said arm, a short distance above said bracket, I have fastened a pointed pivot, 9b over which said arm rocks against said metal frame, as it swings toward said frame and away again. And on the vertical bracket 5 a short distance above said pivot, I have fastened a horizontal bracket 9c and bent it over around the arm 9 to limit the movement of said arm, as it rocks forward and backward over its pivot 9b in normal service. And on the upper end of the arm 9, I have fastened a flexible feed pawl 9d with its outer end bent, as shown in Fig. 2, and adapted to grapple one of the feed pins 6b of the magazine 6 to pull it towards the rocking arm 9, as the core of the solenoid motor is drawn inwardly and thus to rotate said magazine intermittently a predetermined distance. The outer end of said feed pawl is provided with a long bevel so that on its return stroke said pawl will slide up over the next feed pin and drop down to grapple it and pull it towards the rocking arm 9 as said solenoid is again intermittently energized. But in connection with the means for the rotation of the magazine 6, it should be observed in Figs. 1 and 2 that the helical extension spring 3b has its upper end attached in the slotted top of the post 3a securely fixed in the metal frame 3 at the backside thereof, while the lower end of said spring is attached to the upper end of the oscillating arm 9. With this equipment, we can readily see that, when the solenoid motor is not energized, the spring 3b draws the upper portion of the oscillating arm 9 towards the magazine 6 to the limit of rocking stroke of said arm, so that the outer end of the feed pawl 9d, in a long upward curve, shown in Fig. 2, slides up over the next feed pin 6b, and dropping down grapples that pin and rests, ready to pull said feed pin towards said rocking arm to the limit of the stroke of said arm when the solenoid motor is again energized in its intermittent action by means of the conventional intermittent switch 10. In this way, when my electro-automatic advertising machine is connected up with the source of electric supply, for actual service, and the supply switch 9x is closed, I get my intermittent service with the solenoid motor 8 by means of the conventional intermittent switch 10, shown in Figs. 1 and 9, supported be-

tween the flexible conductor-strips, 10a and 10b, rigidly installed in the insulated binding posts, 10c and 10d, respectively.

In Fig. 1, are shown the two supply wires. The first supply wire 9y is connected to one side of the supply switch 9x, and the other wire is connected to the outer binding post 10c. I will now describe the course of the electric current passing through my said advertising machine. The incoming electric current passing through the first supply wire 9y to one side of the supply switch 9x, thence through the wire 8a to the solenoid 8 and through said solenoid to the wire 8b, shown in Fig. 1, and thence to the inner binding post 10d, thence through the inner flexible conductor-strip 10b, shown in Fig. 9, to the conventional intermittent switch 10. And after a period of six seconds, more or less, of rest, the current will pass through said intermittent switch and on through the outer flexible conductor-strip 10a and to the outer binding post 10c and return through the other supply wire 10y to the source of the current. When said supply switch is open, the manual shifting knob 9z is down, as shown in Fig. 1; and when said switch is closed, the knob 9z is in the upper part of its shifting slot.

The small oblong, rectangular piece of colored glass 1z set between the upper edges of said reflecting mirrors, as shown in Fig. 6, is fixed there for the purpose of showing an oblong, rectangular colored field in twelve border sections around the intermittently changing projections of mathematically symmetrical forms of variously colored lights thrown by my said advertising machine upon any distant advertising display-screen. And any name, as Coca-Cola, sketched or printed upon said oblong rectangular piece of colored glass, would appear much enlarged in said twelve fields of colored light around said projection on said advertising screen, as one feature of the advertisement. The size of said advertising screen and of the symmetrical projections depend upon the distance of said display screen from said advertising machine and upon the capacity of said magnifying lens used for any such purpose. The peaked comb 1m fixed on the upper part of the reflector-cylinder 1, shown in Figs. 1, 6 and 8, but left off in Fig. 7, I use for a means of quickly adjusting the rotary position of the reflector-cylinder 1 in the spring-clamps, 1x and 1y, when my advertising machine is being assembled. When the reflecting mirrors, 1a and 1b, are being adjusted in the reflector-cylinder 1, they should be set and fixed so that the plane passing through the axis of said cylinder and bisecting the thirty-degree space between the inner surfaces of the reflecting mirrors, will also pass through the sharp peak of said comb. Consequently, the sharp peak of said comb enables one to adjust quickly the rotary position of the reflector-cylinder in said spring-clamps so that the plane bisecting the thirty-degree space between said reflecting mirrors will rest at right angles to the horizontal base of the advertising screen. Then the symmetry of the intermittently changing forms projected upon said screen will be mathematically correct.

The circular rotary kaleidoscopic magazine 6, shown in Figs. 3, 4 and 5, is provided with a strong circular face-plate 6y as that part of its frame in which the feed-pins, 6b, 6b, are rigidly installed. The smooth circular projection at the back thereof is placed in the circular journal 5a in assembling said advertising machine and to

hold the magazine in place for rotation I press the rear end of the reflector-cylinder 1 lightly against the smooth glass front 6d, as I push said cylinder firmly into the spring-clamps, 1x and 1y. And the reflecting mirrors are securely held in their service positions in the inside of said reflector-cylinders by means of small wooden blocks glued therein, as shown in Figs. 6 and 7.

The binding posts, 10c and 10d are securely installed on the insulation-plate 10x mounted on the outer end of the rail 2, as shown in Figs. 1 and 9.

I have installed in my said advertising machine a magnifying lens, a predetermined distance in front of said reflector-cylinder, broadside thereto and concentric with the axis thereof.

Thus it can readily be seen that I have designed and developed a new and attractive device in the Hunt electro-automatic advertising machine. But in the description of said new and useful machine, as set forth in the foregoing specification, it should be understood that the specific details of the various parts of the instant embodiment of my invention, as illustrated in the drawing thereof and fully described, are not to be considered as limitations in the construction of my new device; and that I may make desirable modifications in these details to facilitate quantity production, provided I keep within the spirit and scope of my invention and claims.

Now, having thus described the various features of my new invention, the details of construction, arrangement and combination of parts, as well as their functions and the ways and means of assembly, operation and application; those features and accessories of my new device for the purpose hereinabove explained, on which I desire Letters Patent granted to me, I have set forth specifically in the following claims.

I claim:

1. In an electro-automatic advertising machine of the character described, a circular rotary kaleidoscopic magazine, having in its frame a strong circular face-plate provided with feed-pins installed therein; a circular journal designed for holding said magazine for the service rotation thereof; a circular transparent glass front and back installed in said magazine a predetermined distance apart; a plurality of variously colored crystal glass gems having many highly-polished facets on the surfaces thereof, said gems being loosely held therein between said front and back glasses; a reflector-cylinder in said advertising machine securely held in its service position by means of spring-clamps mounted on a rail in said machine, the back end of said cylinder resting lightly against the front glass of said magazine to help hold the rotary magazine in its operative position; two oblong rectangular reflecting mirrors installed longitudinally in said reflector-cylinder, with their inner lower edges set together and their upper inner edges set thirty degrees apart; an oblong rectangular piece of translucent colored glass fixed between the upper edges of said mirrors at the rear end of said cylinder; a magnifying lens installed in said advertising machine a predetermined distance in front of said cylinder and concentric with the axis thereof; means for rotating said magazine intermittently; means set a predetermined distance back of said magazine and concentric therewith for furnishing ample light for various kinds of advertising; an opaque cap on the front end of said reflector-cylinder, provided with a small circular opening concentric with the axis there-

of, for the purpose of shutting off excessive light coming from said lighting means, and for forcing the available rays to the central part of the magnifying lens, to be projected on a distant advertising screen, as described.

2. In an electro-automatic advertising machine of the character described, a circular rotary kaleidoscopic magazine, having as a part of its frame a strong circular face-plate provided with a plurality of feed-pins installed therein for rotating said magazine; a circular transparent glass back and front fixed in the frame of said magazine a certain distance apart; a plurality of translucent colored crystal glass gems loosely held in said magazine in the space between said circular glass back and front, said gems having a plurality of highly-polished facets on the surfaces thereof; a reflector-cylinder in said machine securely held in its service position by means of two spring-clamps mounted on a part of said machine; a metal frame for supporting parts of said machine; a solenoid motor operatively installed in said frame and provided with a reciprocating core, adapted to be drawn inwardly when said solenoid is energized and allowed to be drawn out again when the solenoid is not energized, the outer end of said core being attached, in a pintle hinge, to the lower end of a long, vertically-disposed rocking arm adapted to rock back and forth to rotate said magazine intermittently; a pointed pivot fastened on said rocking arm, in a pintle hinge, a short distance above said core-attachment, the point of said

pivot resting against said metal frame, the pivot being adapted for the oscillating arm to rock over; sheet metal brackets surrounding said rocking arm to limit the rocking strokes thereof; a flexible feed-pawl fastened on the upper end of said rocking arm with its outer end extending over the feed-pins in said magazine, the feed-pawl being bent near its outer end and adapted to drop slightly and grapple one of said feed-pins and pull it towards the rocking arm, as the energized solenoid draws its core inwardly; a helical extension spring, with its upper end fastened in a slotted post and its lower end attached to the upper end of said oscillating arm, said spring being adapted to pull said arm towards said magazine, as the solenoid motor ceases to be energized; said flexible feed-pawl being formed with a long upward curve at the outer end thereof, adapted to allow the feed-pawl to slide up over the next feed-pin to grapple that, so as to pull it towards the rocking arm when the solenoid is again energized; a conventional automatic intermittent switch supported between two flexible metal strips installed in two insulated metal binding posts, said intermittent switch being adapted to cut the current from the solenoid every five or six seconds, so that the rocking arm may be operated intermittently to cause a different projection on the advertising screen; and a supply switch and supply wires in said device, adapted to operate said advertising machine indefinitely.

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