

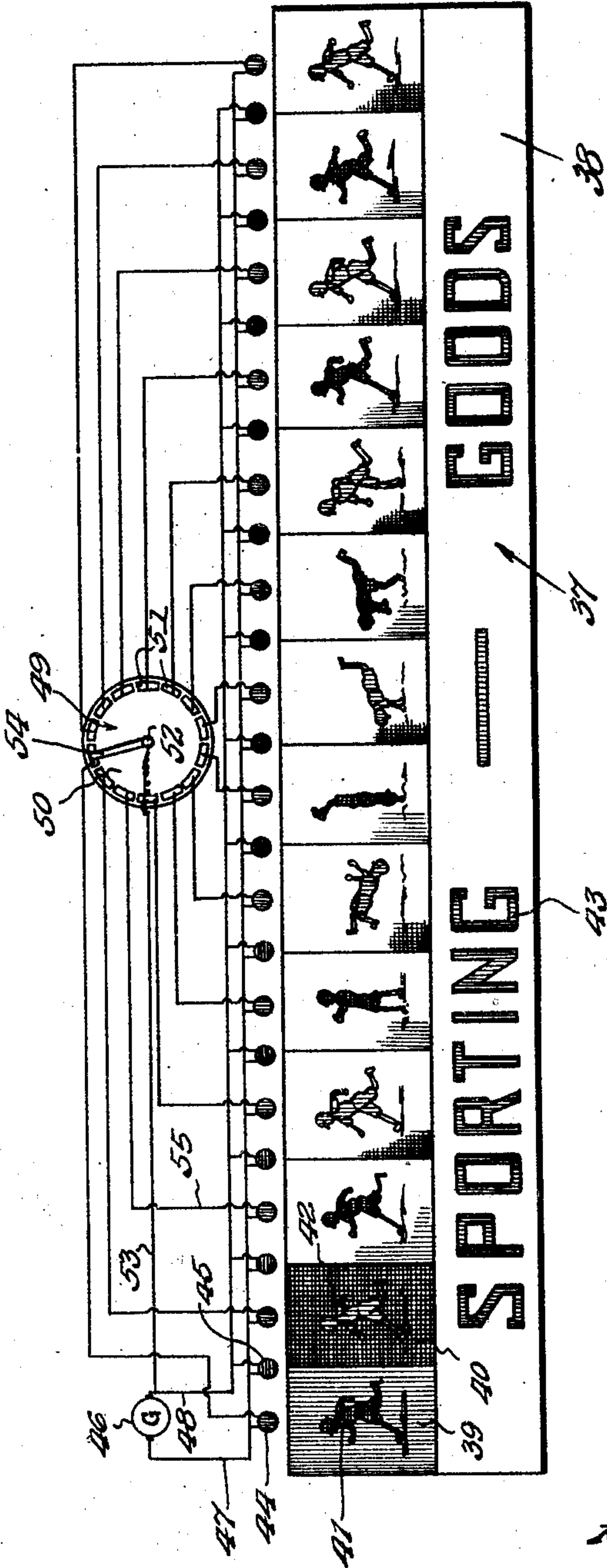
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R. M. CRAIG

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DISPLAY APPARATUS

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Inventor

R. M. Craig.

By *Lacey, Lacey*, Attorneys

UNITED STATES PATENT OFFICE

RICHARD M. CRAIG, OF SAN ANTONIO, TEXAS, ASSIGNOR, BY MESNE ASSIGNMENTS,
TO THOMAS W. MENEFEE, OF SAN ANTONIO, TEXAS

DISPLAY APPARATUS

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This invention relates to display apparatus and more particularly to an advertising sign of the type disclosed in my Patent No. 1,698,223, and of which the present application constitutes a division.

One object of the invention is to provide a sign having figures painted thereon, in pigment colors against a neutral background, other advertising matter being also painted upon the sign in pigment colors and the sign being illuminated by lights emitting spectral colors, having such relation to the pigment colors and so controlled that when the sign is in operation a figure will appear to move across the sign board.

Another object of the invention is to provide a method of and apparatus for not only producing the effect of apparent continuous motion or continuous change in appearance of the subject matter to be displayed, but also displaying the subject matter under pleasing colored lighting conditions, so that, as an advertising medium, the surface to be displayed attracts immediate attention because of the presence of the factors of colored light illumination and animation.

The invention is illustrated in the accompanying drawing wherein is disclosed an embodiment of the invention.

In the drawing, and in the description which is to follow, the invention has been illustrated and will be described as applied to advertising displays, but the principles of the invention are by no means limited to this particular use as they may find embodiment in displays of various characters, and, therefore, what is illustrated and described is to be considered merely as representative of a concrete embodiment of the inventive idea and not as restricting the invention to the specific disclosure.

In the description, reference will be made to a "display surface" and this term is intended to cover any surface of any character whatsoever upon which there is represented matter to be displayed and regardless of the character of the said matter. Where reference is made to light rays having "different color characteristics" the term is intended to indicate that the light rays are not identi-

cally the same but possess such spectral or color difference between themselves as to suit the purposes of the invention. I will also refer to "spectral color" and such reference applies to colors of the spectrum as represented by colored light rays. Reference will also be made to "neutral colors" which colors are employed, in the form of pigments, as backgrounds, and by neutral colors is meant such colors as do not materially change under the light rays by which the display surface is illuminated or, in other words, those colors which display no decided color characteristics such as are peculiar to primary colors, and which remain of about the same apparent density under complementary or primary light ray illumination.

In the embodiment of the invention illustrated in the accompanying drawing the display surface is indicated in general by the numeral 37 and a longitudinally extending area of the said surface has applied to it a light neutral pigment of any of the light neutral colors so as to provide a light neutral background area indicated by the numeral 38. To certain other area portions of the display surface, pigment of a distinctive color, as for example red, is applied to provide background areas 39, and these areas are alternated with background areas 40 which are represented in a dark pigment color of a neutral character as for example black or brown. The areas 39 and 40 extend in a series longitudinally of the display surface and in a series offset vertically with relation to the background 38. Figure representations 41 are depicted upon the background areas 39 in a dark neutral color such for example as black, and image representations 42 are depicted upon the background areas 40 in a distinctive color such for example as red and which color corresponds to or does not possess any visible spectral difference from the color in which the background areas 39 are represented. The image representations 41 and 42 are alternately arranged throughout the entire series and represent postures assumed by a person running across the sign board and turning a hand-spring intermediate the width thereof.

Upon the background area 38, which as previously stated, is of a light neutral color, there may be represented any suitable advertising or other matter indicated by the numeral 43 and in representing this matter, a pigment of a distinctive color, in this instance corresponding substantially to the color of the background areas 39, will be employed, namely red. The numeral 44 indicates a series of red light bulbs which are arranged each above a respective one of the background areas 39 and 40, so as to illuminate the same in a manner to be presently explained, and the numeral 45 indicates a number of blue light bulbs which are alternately arranged with respect to the red light bulbs 44 and are positioned substantially vertically above and in alinement with the line of division between the relatively adjacent ones of the background areas 39 and 40. The numeral 46 indicates a source of current supply to one side of which is connected a conductor wire 47 electrically connected with one terminal of the socket for each of the bulbs 44 and 45, and a conductor wire 48 is connected with the other side of the source of current supply and to the other terminal of each socket for each blue light bulb 45, so that the bulbs 45 will be continuously lighted during the operation of the display apparatus. The numeral 49 indicates in general an automatic flasher which may comprise a flasher disc 50 having an annular series of contact strips 51 upon its face, and the numeral 52 indicates a rotary shaft to which is connected a conductor wire 53 which leads from the last mentioned side of the source of current supply to the shaft supporting the contact arm 54 which, in the rotation of the shaft, is designed to successively sweep over the contact strips 51. Conductor wires 55 are connected to the contact strips 51 and are led to and electrically connected with the other terminals of the sockets for respective ones of the red light bulbs 44. It will now be evident that inasmuch as the entire display surface is continuously illuminated by light rays from the blue light bulbs 45, all of the image representations 41 and 42 will, under such illumination, be invisible. This is due to the fact that the red background areas 39, under blue light illumination, will appear substantially black, and, as the image representations 41 are in black or any other suitable dark neutral color, there will be no contrast between the backgrounds and the image representations. Inasmuch as the image representations 42 are in red, they will appear substantially black under the blue light illumination and there will, therefore, be no contrast between said representations and the black backgrounds 40 upon which they are depicted. However, as the flasher 49 is operated, the red lights 44 will be successively flashed on in order ranging from the right hand end of the board to the left hand end thereof. Therefore, the image representations 41 and 42 will be successively illuminated and displayed to the vision of the observer. As each background area 39 is flooded with red light rays, the image representation 41 which is in black or some other dark neutral color, will appear substantially black against an apparently white background, and as each background area 40 is flooded with red light rays the image representation 42 thereon, being represented in red pigment, will appear substantially white against a black background. Therefore, in this embodiment of the invention, the image will apparently successively appear black and then white as the various movements are portrayed. Inasmuch as the display surface in its entirety is continuously flooded with blue light rays, the matter 43, being in red, will appear substantially black against the light neutral background and will be continuously displayed to view. It will be understood that instead of employing red as a distinctive pigment color in which to portray the image representations 42 and the background areas 39, as well as the matter 43, any other distinctive pigment color may be employed such for example as green, in which event green light bulbs would be substituted for the red light bulbs 44, and red light bulbs would be substituted for the blue light bulbs 45. In fact, there are many possible selections of pigment and spectral colors which may be employed in carrying out the invention as exemplified in the drawing.

What is claimed is:

1. Means for displaying the effect of continuous motion comprising a display surface having a series of alternately arranged background areas of dissimilar colors, the surface bearing a series of representations of an image representing different positions of movement thereof, each of the image representations occupying an individual one of the background areas and being of a color substantially corresponding to the color of the next adjacent background area, means for displaying the whole of said surface under light rays of a spectral color in contrast with the color in which certain of the images are represented, and means for successively individually displaying the background areas under spectral light rays of a color corresponding to the color in which the last mentioned images are represented.
2. Means for displaying the effect of continuous motion comprising a display surface having a series of alternately arranged background areas alternate ones of which are represented in a distinctive pigment color and the others in a dark neutral color, the surface bearing a series of representations of an image representing different positions of movement thereof, each image representation

occupying an individual one of the background areas, the image representations in the first mentioned background areas being of a dark neutral color and the image representations in the other background areas being of a distinctive pigment color corresponding substantially to the color of the first mentioned background areas, means for displaying the whole of said surface under light rays of a spectral color in contrast with the said distinctive pigment color, and means for successively individually displaying the background areas under spectral light rays of a color corresponding to the said distinctive pigment color.

In testimony whereof I affix my signature.

RICHARD M. CRAIG. [L. s.]