R. M. CRAIG.

ADVERTISING SIGN.

APPLICATION FILED AUG. 21, 1917.

1,276,494.

Patented Aug. 20, 1918.

4 SHEETS—SHEET 1.

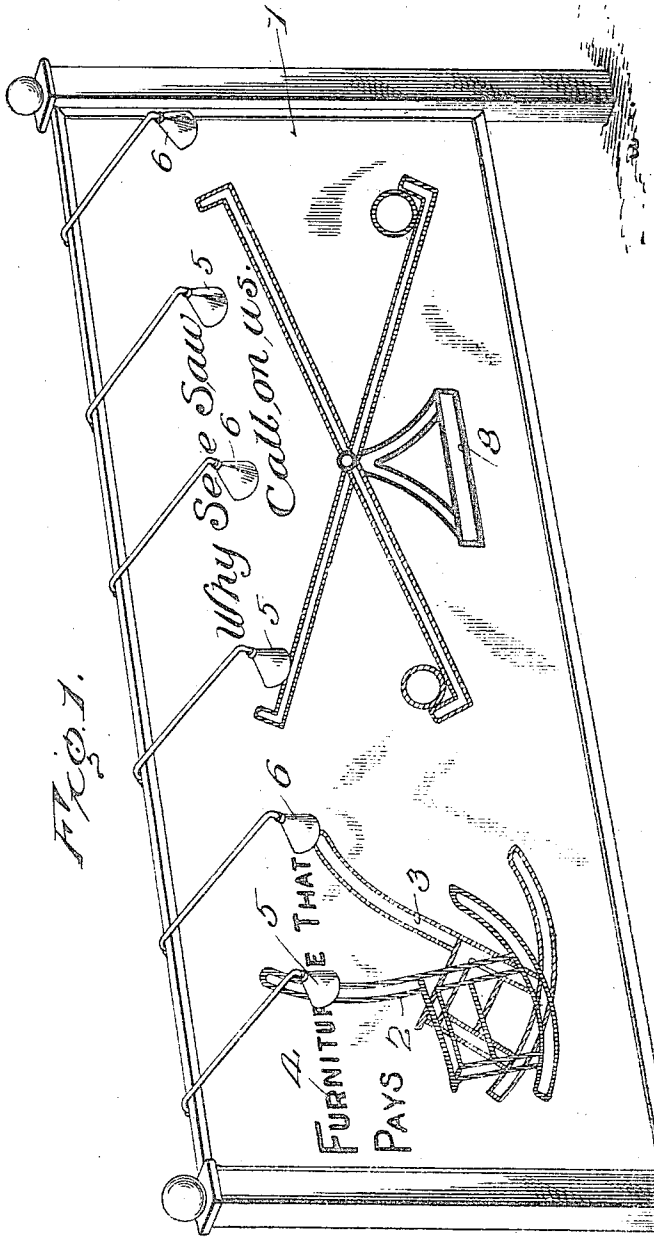


Fig. 1.

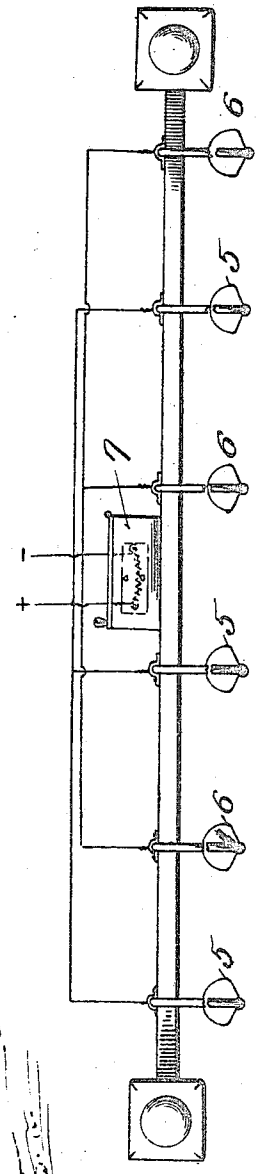


Fig. 2

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4 SHEETS—SHEET 2.

FIG. 3.

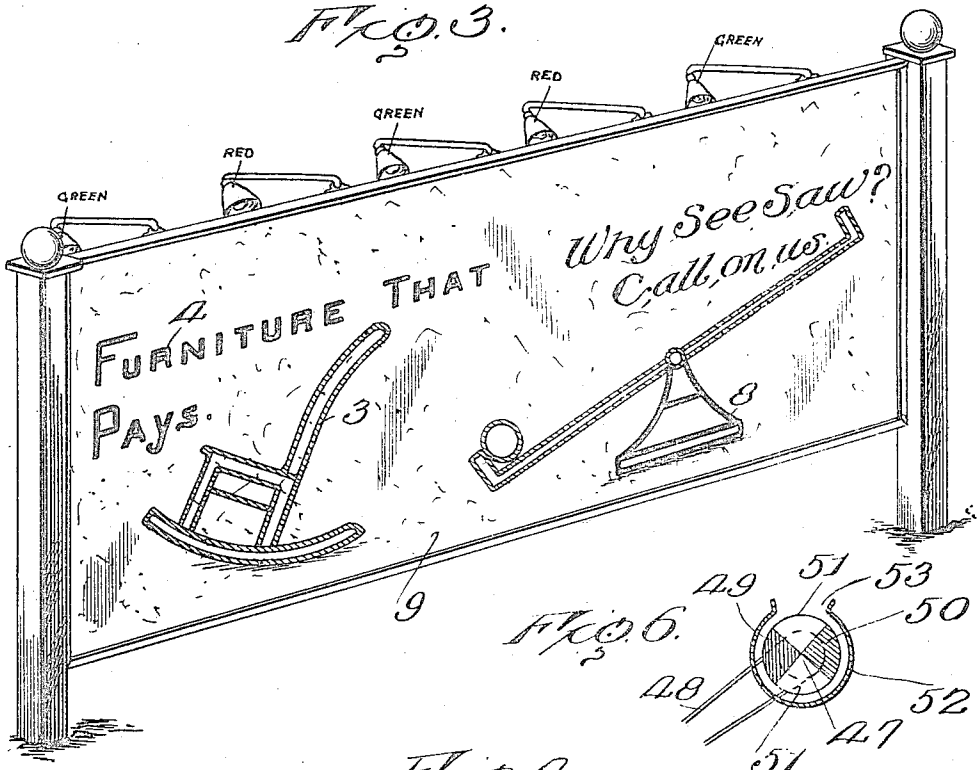
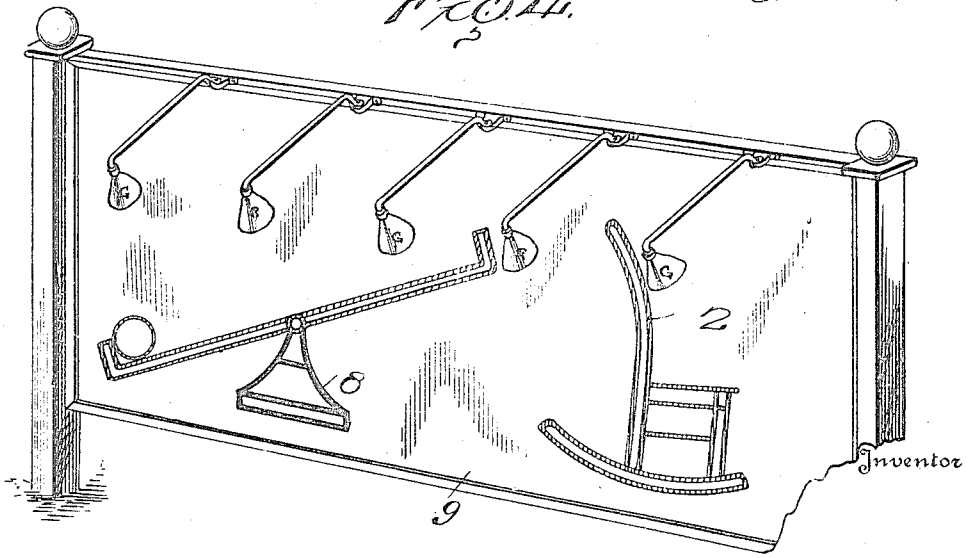


FIG. 6.

FIG. 4.



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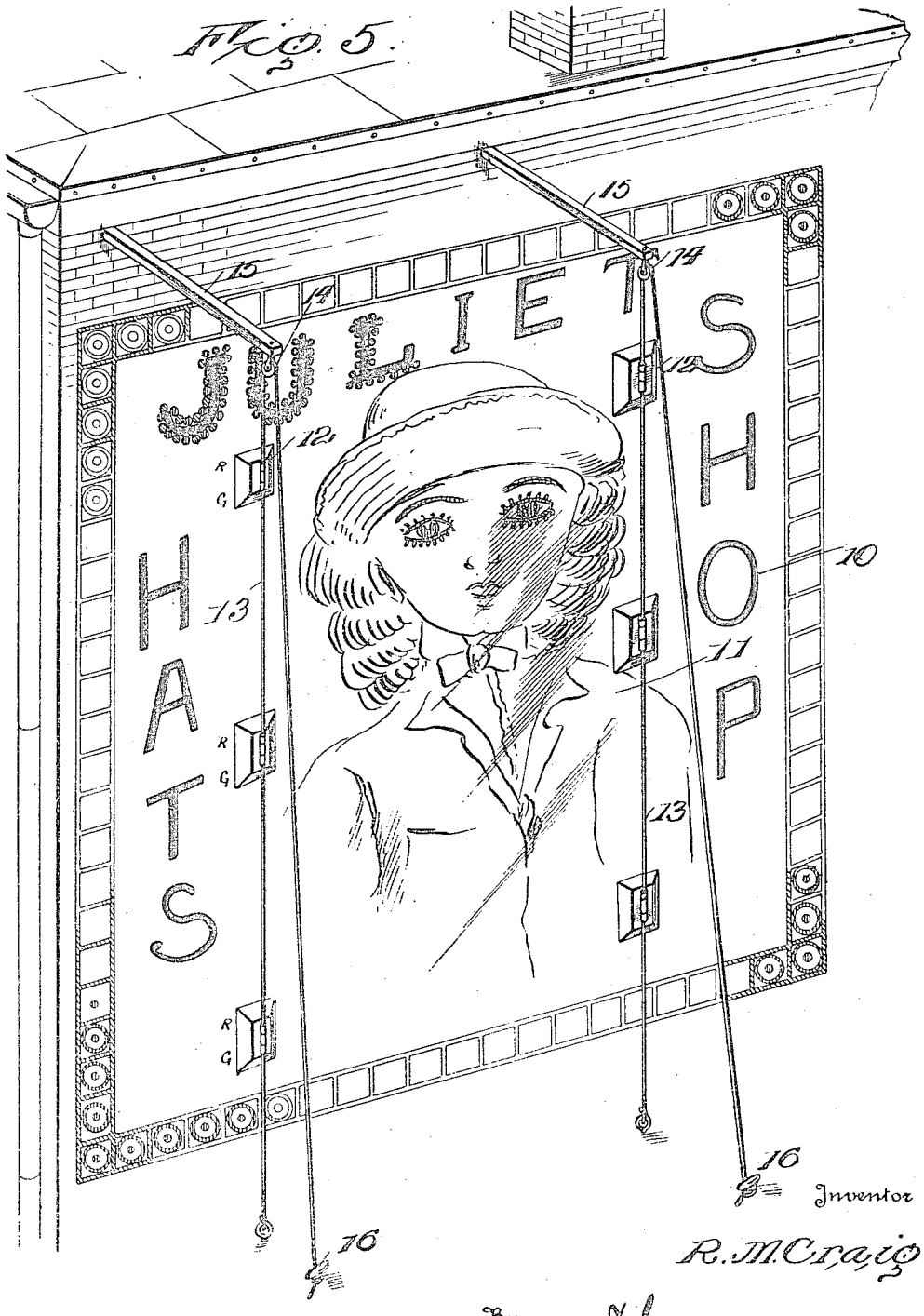
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4 SHEETS—SHEET 3.

FIG. 5.



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4 SHEETS—SHEET 4.

FIG. 7.

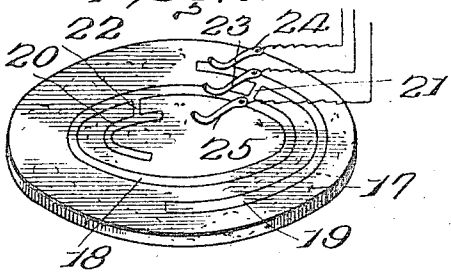


FIG. 8.

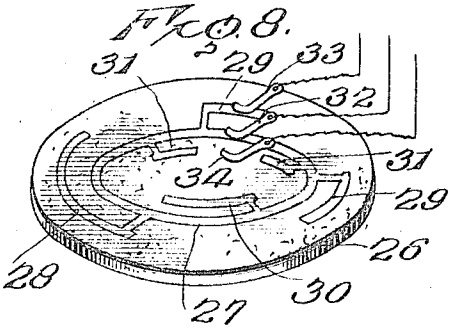


FIG. 9.

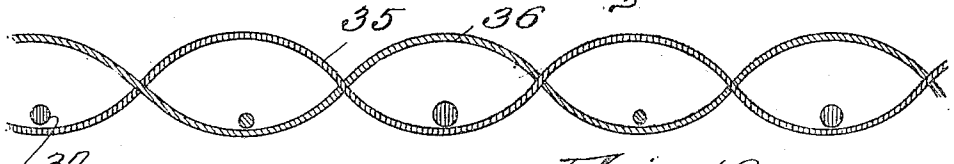


FIG. 10.

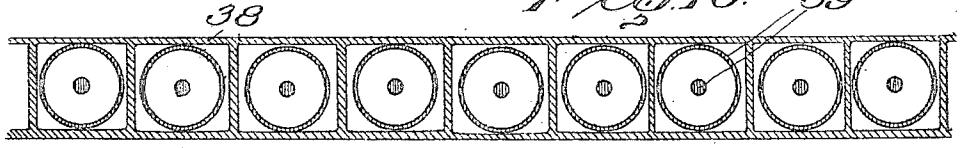
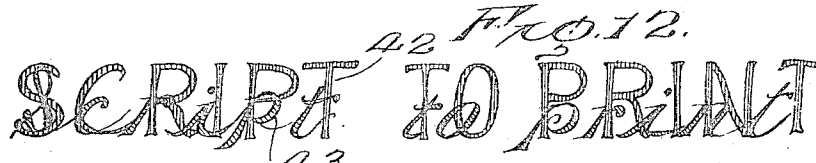


FIG. 11.



FIG. 12.



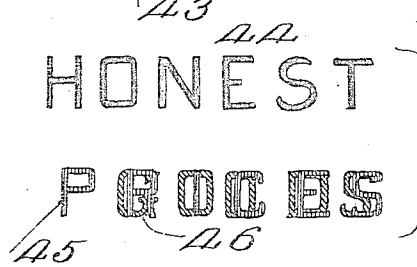


FIG. 13.

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UNITED STATES PATENT OFFICE.

RICHARD M. CRAIG, OF SAN ANTONIO, TEXAS.

ADVERTISING-SIGN.

1,276,494. Specification of Letters Patent. Patented Aug. 20, 1918.

Application filed August 21, 1917. Serial No. 187,412.

To all whom it may concern:

Be it known that I, RICHARD M. CRAIG, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Advertising-Signs, of which the following is a specification.

This invention relates to advertising signs and more particularly to signs of that type especially designed for outdoor display and which usually cover a relatively large area. The invention is particularly adaptable for embodiment in signs which are to be mounted upon the roof of a building or beside a thoroughfare or displayed upon the walls of a building. In order to render large signs attractive and particularly when located upon the roof of a building, it is customary to produce the surface or field of the sign by assembling a great number of electric lamps and then provide an expensive selective circuit closing mechanism for successively lighting various groups of the lamps to produce different words, symbols, or the outlines of objects. While such a sign possesses the element of apparent motion and is, therefore, more attractive than a fixed and unchanging sign, the cost of installation and maintenance is so great as to prohibit their use by ordinary concerns or advertisers. In certain types of such signs an attempt is made to more nearly represent motion by having the lamps of a series or group successively illuminated, as, for example, the lamps of a series or group representing liquid flowing from a bottle in the advertisement of a beverage. However, even in signs of this particular construction there is not such representation of motion as would actually suggest the true movement of an object. As concerns the second class of large display signs above mentioned, namely, that particular class which is ordinarily arranged beside a thoroughfare, these signs consist ordinarily merely of a painted surface illuminated by a number of electric lamps disposed in a row in front of the sign at the upper portion thereof. Such a sign presents absolutely no suggestion of animation and therefore attracts little attention. The present invention, therefore, aims to provide a sign of the general class mentioned which will cost little more if any to install and maintain than the last-mentioned type of sign and which will yet, in its operation, present in a realistic manner the motion of objects depicted upon its surface, which surface is merely a painted one and not built up of a great number of electric lamps as in the first briefly described sign.

Another aim of the invention is to provide for the embodiment of the invention in a sign covering a relatively large area whether the surface to be displayed is located upon the roof or walls of a building or on a signboard located beside a thoroughfare, the installation of the sign requiring only the painting of a suitable sign upon an appropriate surface and the arrangement in proximity to the said surface of a small number of electric lamps, as, for example, in the instance of the thoroughfare sign above referred to.

In the accompanying drawings:

Figure 1 is a perspective view of one form of sign embodying the present invention, which form may either be employed upon a roof or other elevated support, or beside a thoroughfare;

Fig. 2 is a plan view of the sign shown in Fig. 1 and illustrating diagrammatically, in a general manner, the means for supplying electric currents to the lamps, which lamps are of different colors for a purpose which will presently be explained;

Fig. 3 is a perspective view illustrating the front of a sign similar to the sign shown in Fig. 1 except that it is adapted for both day and night display;

Fig. 4 is a perspective view, looking at the rear of the sign shown in Fig. 3;

Fig. 5 is a perspective view illustrating the application of the principles of the invention to a sign painted upon the wall of a building;

Fig. 6 is a plan view illustrating a modification of the means for illuminating any of the three previously described embodiments of the invention;

Fig. 7 is a perspective view illustrating one form of electric flasher to be employed in controlling the lights of the sign;

Fig. 8 is a similar view illustrating another form of flasher.

Figs. 9, 10, 11, 12 and 13 are views illustrating in a general way various arrangements of sign characters and the like.

In that form of the invention shown in Figs. 1 and 2 of the drawings, the numeral 1 indicates a signboard which may be of wood, metal, or, in fact, any material suit-

able for the purpose and supported in any desired manner. Fig. 1 illustrates a specific example from which the principles of the invention may be readily understood but it will be understood, of course, that the advertising matter shown in said figure is only illustrative and that there are numerous arrangements and effects which may be produced at the will of the advertiser or the person painting the sign. In the particular example shown the display surface of the sign bears, for example, the representation of a rocking chair painted in red as indicated by the numeral 2, in a forwardly rocked position and the representation of the same chair rocked in a rearward direction and painted in green or bluish green, as indicated by the numeral 3, and in connection with this representation of the two positions of the chair, the said display surface of the sign bears certain advertising matter, as indicated by the numeral 4, this matter being painted in black. By reference to the said figure it will be observed that the two representations of the chair are arranged in superposed relation. Arranged upon the signboard in front of the display surface and preferably at the top thereof, are a series of electric lamps preferably provided with reflectors, certain of the lamps being indicated by the numeral 5 and the others by the numeral 6. In the present instance the lamps of the two colors are alternately arranged although a different arrangement may be had if found desirable. Upon the board and preferably at the back thereof, there is arranged an electric flasher of any ordinary type indicated by the numeral 7 and in circuit with the lamps. In the present instance this flasher is of the well-known double thermo type and hence it is unnecessary to provide any mechanism such as is necessary in the use of a rotary or mechanically moved flasher or circuit breaker. In the electric circuit, the lamps and flasher are so arranged that the lamps 5 which are green or bluish green and the lamps 6 which are red will be alternately brought into the circuit so that at one time the display surface of the board 1 will be flooded with bluish green light and then with red light, this change in lighting effect being preferably at relatively short intervals. It will now be understood that when the surface of the board is flooded with the green or bluish green lights the representation 3 of the rocking chair will be invisible as the green color is neutralized or absorbed. On the other hand, the representation 2 in red will under the green light, appear black, and, therefore, the chair will appear as though rocked forwardly. Immediately upon cutting out of the green or bluish green lights and the flooding of the surface of the board with the red light, the representation 2 of the chair will become invisible and the representation 3 will appear in black so that the chair will appear to have moved from a forwardly to a rearwardly rocked position. As the periods of illumination are relatively short the effect produced will be that of a rocking chair being rocked backwardly and forwardly, the advertising matter 4 being at all times visible. Of course, if desired, advertising matter in red and green may be also painted upon the board explaining the use of an article, for example, in one position and its use in another position, the matter explaining the several uses being suitably positioned or associated with the several positions of the article. Also, if desired, a stationary element of an object having moving parts may be painted in black as, for example, in the instance of the pedestal 8 for supporting the seesaw shown at the right in Fig. 1 so that regardless whether the display surface of the board is flooded with red or bluish green light the fixed portion of the object or structure will appear or be visible in both positions of the moving parts. While there are colors other than red and green which may be made use of in producing the results above stated, these colors are to be preferred for the reason that when the display surface of the sign is flooded with red light the bluish green representation will appear black and therefore distinct in outline and, in a like manner, when the said surface is flooded with a bluish green light the red surface will appear black.

In that form of the invention shown in Figs. 3 and 4 of the drawings, there is disclosed a sign which will possess value as an advertising medium in the day time as well as at night to a greater degree than the sign just described. In these figures the numerals appearing in Figs. 1 and 2 are employed to designate the same elements or features as in the said Figs. 1 and 2 and the structure of the sign is substantially the same except that the advertising matter is painted upon a semi-transparent or translucent sheet of canvas or like material, indicated specifically by the numeral 9. Fig. 3 represents a front view of the sign and upon the front or display surface of the canvas or other semi-transparent or translucent sheet 9, there is painted in black the advertising matter indicated at 4 and the pedestal 8 also in black and there is also painted upon this face of the canvas in green the rocking chair in the position indicated by the numeral 3 and the seesaw in a corresponding position. Upon the reverse or rear face of the canvas the rocking chair in the position indicated by the numeral 2 and the seesaw in its other position are painted in red. The electric lamps 5 and 6 instead of being positioned in front of the display surface, as in Fig. 1, are in this form of the invention arranged

in rear of the canvas 9 so that the canvas is flooded with red and bluish green light from the rear in order to display the advertising matter thereon. Of course, in the day time the sign will appear exactly as illustrated in Fig. 3 of the drawings and confusion which would be likely to result from illustration upon the display face of the sign of different positions of objects in superposed-relation, is obviated. However, when the sign is illuminated at night and the red and green lights are alternately flashed on and off, the rocking chair, for example, will appear in black as in the position shown in Fig. 3, when the canvas 9 is flooded with red light and when the canvas is flooded with green or bluish green light, the said chair in the position indicated by the numeral 2 will appear in black. Thus exactly the same result is obtained as in the first described form of the invention except with the added advantage that the sign shown in Figs. 3 and 4 possesses value as an advertising medium during daylight hours as well as at night. At this point it may be stated that while I have found that the best results can be obtained by employing bluish green as one of the colors, various shades of green may be made use of and therefore wherever in the specification and claims the word green is employed it is to be understood that this term includes all shades of green suitable for the purpose.

Fig. 5 of the drawings illustrates the principles of the invention employed in the display of a sign painted upon the wall of a building and in the specific example given, the sign includes certain advertising matter indicated by the numeral 10 and painted in black and the representation, more or less, in outline and in black, as indicated by the numeral 11, of a young lady. All portions of this representation are painted in black except the eyes which are painted in red and the lower edge of the eyelid and the eyelashes which, in the open position of the the lids, are also painted in red. In green, the edges of the eyelids and the eyelashes are painted in closed position so that when the sign is flooded with green light the eyes will appear to be open and when the sign is flooded with red light the eyelids will appear to be closed. It will be understood, of course, that parts of the apparel may be painted in one form or style in red and in another form or style in green and it will further be understood, of course, that various figures or objects may be represented in place of the specific example shown in the said Fig. 5. It will also be understood that fanciful borders may be painted around the letters comprising the advertising matter 10 and that, if desired, the entire sign may be surrounded or outlined by a border part of which is painted in red and the other part in green.

In order that the sign just described may be flooded alternately with red and green lights, red and green light bulbs may be arranged within suitable reflectors 12 mounted upon cables 13 which pass over pulleys 14 supported from the ends of beams 15 which project from the wall upon which the sign is painted. Of course, a suitable flashing device will be provided for alternately cutting the red and green lights into circuit and these lights may be lowered to the roof of a building adjacent the wall bearing the sign in order to permit of renewal of light bulbs, by providing cables of suitable length and connecting the cables to anchoring cleats 16 upon the said roof.

Various types of flashers or circuit breakers may be employed for the purpose of alternately cutting the red and green lamps into circuit and Figs. 7 and 8 illustrate two forms of such a device. In Fig. 7 the numeral 17 indicates a flat disk having upon its upper face an annular contact ring 18 and substantially semi-circular contact strips 19 and 20. The strips 19 and 20 describe, however, slightly less than a semi-circle and their ends terminate short of a line diametrical to the contact ring 18 and extending between the ends of the said strips 19 and 20. The strips 19 and 20 are electrically connected, as at 21 and 22, respectively, with the ring 18 and contact fingers 23, 24 and 25 are positioned to bear respectively upon the contact ring 18 and the strips 19 and 20, these contact fingers being in circuit with the red and green lights so that for example, when the strip 19 is in contact with the finger 24, as shown in Fig. 7, the red lights will be brought into circuit and when the strip 20 is in contact with the finger 25 the green lights will be brought into circuit. Due to the fact that the strips 19 and 20 describe slightly less than a semi-circle, a period of occultation will occur between the periods of illumination in red and green, thus permitting persistence of vision to assist in producing the effect of animation. In some instances, as in the case of the rocking chair heretofore mentioned, it is desired that the sign operate in such a manner that the chair will appear to be rocked back and forth with a regular rocking motion. In the instance, however, of a dancing figure or two prize fighters, for example, it is desirable that the lights be flashed in such a manner as to give the appearance of irregular motion so that the image or images will at times appear to change positions much more rapidly than at other times. In order that this may be accomplished a flasher such as shown in Fig. 8 of the drawings may be employed. This flasher comprises an insulating base or disk 26 carrying a contact ring 27 corresponding to the ring 18 above described.

This disk also carries an arcuate contact strip 28 describing, for example, approximately a quarter of a circle and other much shorter contact strips 29 which, however, lie in a circle touching the strip 28. Also there is provided upon the disk a contact strip 30 and shorter contact strips 31. Contact fingers 32, 33 and 34 corresponding to the fingers 23, 24 and 25 are designed to coact respectively with the contact ring 27 and the strips 28 and 29 and the strips 30 and 31. It will be understood that as the disk 26 is rotated through any suitable motor, the red and green lights will be alternately flashed and when supplied with current through the strips 29 and 31 will remain in circuit for a much shorter period of time than when supplied with current through the strips 28 and 30 in order to produce the effect above described.

Figs. 9 and 10 illustrate different border designs which may be employed in connection with any of the forms of the invention heretofore described and in Fig. 9 the border consists of a wavy line 35 painted in red and a wavy line 36 painted in green, the lines intersecting one another between their undulations. Also dots 37 may be printed in red or green as part of the border. Of course, when the red and green lights are alternately flashed the lines 35 and 36 will be alternately absorbed. In that arrangement shown in Fig. 10 the border comprises, for example, a number of squares 38 painted in green in circles and dots 39 painted in red.

In the form shown in Fig. 11 the letters of words of advertising matter may be painted in red, as at 40, relatively tall and narrow and in green, as at 41, relatively short and broad so that when the display surface of the sign is alternately flooded with red and green lights the letters will appear to contract and expand. In Fig. 12 of the drawings the words of advertising matter are, for example, painted in red, as at 42, in print letters and in script letters in green, as indicated by the numeral 43 so that when the sign is in operation the advertising matter will appear alternately in print and in script.

In the example illustrated in Fig. 13 of the drawings, one or more words 44 of the sign may be painted in black and then in superposed relation other words 45 may be painted in red and words 46 may be painted in green. In this particular instance the word "honest" appears in black and the words "prices" and "goods" appear, respectively, in red and green so that in the operation of the sign the words "honest prices" and "honest goods" will alternately appear.

In the previously described forms of the invention the electric lamps are stationary and the supply of current thereto is controlled by means of a flasher. However, if desired, lamps of the character shown in Fig. 6 may be employed. In this figure the numeral 47 indicates an electric lamp supported for rotation and rotated through the medium of a belt or the like indicated by the numeral 48. At one side the lamp is red in color, as indicated by the numeral 49, and at the other side it is green in color, as indicated by the numeral 50, the said lamp being transparent between its red and green portions, as indicated by the numeral 51. The numeral 52 indicates a hood within which the lamp is arranged and this hood has an open side 53 before which the red, transparent and green portions of the lamp are successively brought in the rotation of the lamp.

Having thus described the invention, what is claimed as new is:

1. A device of the class described including a surface bearing in different colors and in superposed relation different non-transparent positions or shapes of symbols, objects, or the like to be displayed, and means for displaying said surface in the presence of a light medium capable of absorbing one of said colors and then displaying said surface in the presence of a light medium capable of absorbing another one of said colors.

2. A device of the class described including a surface bearing in different colors and in superposed relation different non-transparent positions or shapes of symbols, objects or the like to be displayed, and means for automatically displaying said surface in the presence of a light medium capable of absorbing one of said colors, occulting the said surface, and then displaying the said surface in the presence of a light medium capable of absorbing the other one of said colors.

3. A device of the class described including a surface, bearing in black matter to be displayed and bearing in different colors and in superposed relation different non-transparent shapes of symbols, objects or the like to be displayed, and means for displaying said surface in the presence of a light medium capable of absorbing one of said colors and then displaying said surface in the presence of a light medium capable of absorbing another one of said colors.

4. In a device of the class described, a display surface bearing thereon a representation of an object having a fixed part or parts and a movable part or parts, the fixed part or parts being depicted in black and the movable part or parts being depicted in one position in one color and in another position in another color, and means for displaying said surface in the presence of a light medium capable of absorbing one of said colors and then displaying said surface in the presence of a light medium capable of absorbing another one of said colors.

5. In a device of the class described, a translucent display surface having upon one face thereof the representation of an object or the like having a movable part, the representation being in one color and the part being shown in one position of its movement, the said surface having upon its reverse side the representation of the said object in another color and with the movable part in another position, and means for illuminating the said surface by alternately flooding the first and last-mentioned sides thereof with different colored lights, the lights of one color being arranged to absorb one representation of the object and the lights of the other color being arranged to absorb the other representation of the object, parts common to the two representations upon the opposite faces of the said surface being represented in a color non-complemental to the first-mentioned colors.

6. A device of the class described including a surface bearing in different colors and in superposed relation different non-transparent shapes or symbols of objects or the like to be displayed, and means for displaying said surface alternately in the presence of different colored light media each capable of absorbing one of said colors which means comprises suitably colored lights, and means for alternately flashing the said lights on and off.

In testimony whereof I affix my signature.

RICHARD M. CRAIG. [L. S.]