

July 22, 1930.

E. VAN REETH

1,771,237

COLOR COMBINATION SPEED INDICATOR FOR VEHICLES

Filed May 12, 1928

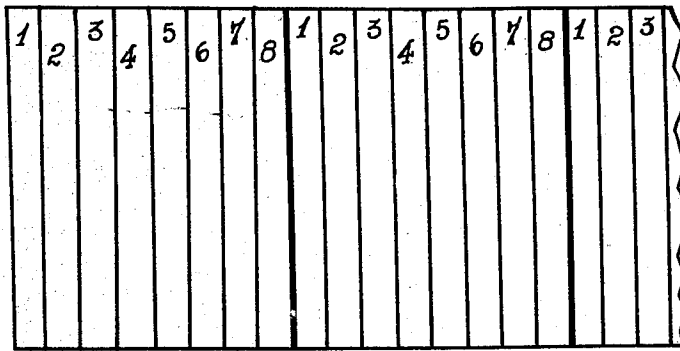


Fig. 1.

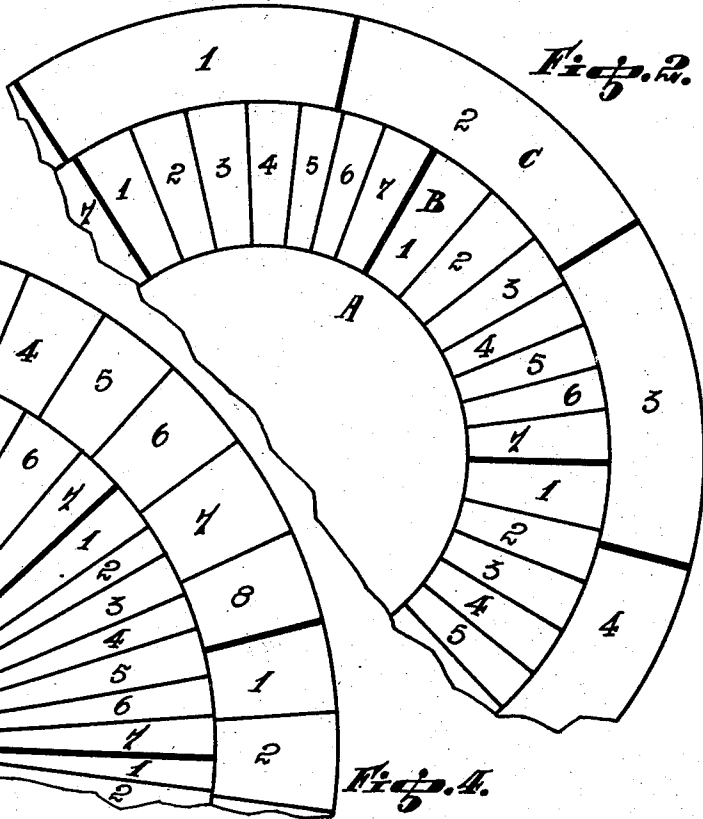


Fig. 2.

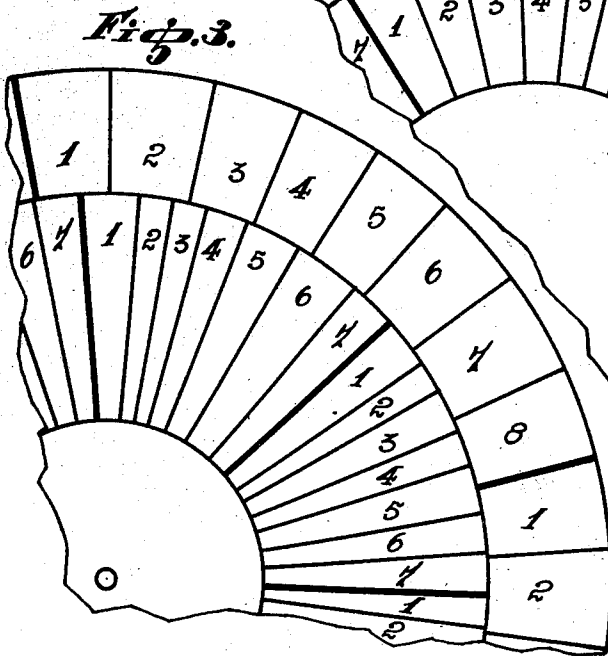
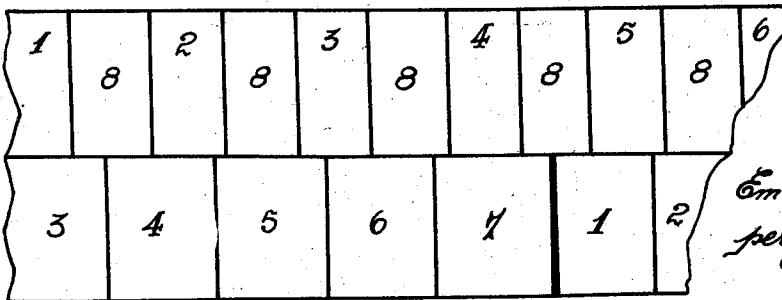


Fig. 3.

Fig. 4.



Inventor.  
Em le Van Reeth.  
per: J. J. J. J.  
Attorney.

# UNITED STATES PATENT OFFICE

EMILE VAN REETH, OF ANTWERP, BELGIUM

COLOR-COMBINATION SPEED INDICATOR FOR VEHICLES

Application filed May 12, 1928, Serial No. 277,324, and in Belgium March 10, 1928.

In his parent application Ser. No. 181,242, filed Apr. 5, 1927, applicant has disclosed the use of the seven fundamental colors of the solar spectrum as speed indicator for vehicles of appreciable speed. It has name-  
 5 ly been proposed to paint with the seven fundamental colors of the white light the body surface of a vehicle or the movable elements forming part of said vehicle, or special  
 10 elements, such as separate discs, which are positively driven by an active member of the vehicle. The arrangement of the fundamental colors of the spectrum is made according to a geometrical design and to ap-  
 15 propriate dimensions, with the aim of producing the desired effect.

The present invention consists in special applications of the same principle according to an improved method, with a view of facili-  
 20 tating said application of the seven colors, in order to obtain new and different effects, so as to constitute for instance on one and the same vehicle speed indicators for differ-  
 25 ent speeds.

A first improvement consists in using, in combination with the seven fundamental colors of the solar spectrum, the uniform white color, said color being applied in  
 30 circles, squares, sectors or any other geometrical design, say between two consecutive series of the seven colors, say between each of the seven colors successively. This arrangement would allow the calculation of the conditions in which said seven colors  
 35 must be applied to be facilitated, said seven colors to be reinforced, while ensuring the desired effect of visual fusion starting from a certain predetermined speed.

In the case of disc wheels or separate discs  
 40 applied to the vehicles, a combination of the above-named eight colors can be applied in radial stripes, the white color being predominating owing to its extension or to its repetition. The greater the extension of the  
 45 white color, the more the speed necessary to produce the appearance of the uniform white color can be reduced, or in other words, the lower will be the speed necessary to obtain the visual fusion of the different colors. Any  
 50 number of sectors painted in the seven or

eight colors can be applied to the wheels or discs, and so as to reduce still more the speed necessary to produce the appearance of the uniform white color, the number of sectors or the extension and repetition of the white  
 55 color must be increased.

Another improvement consists in arranging the colors so that, starting from a certain predetermined speed, a general coloring, say red, yellow, green or blue, as desired by the  
 60 operator will appear, the special arrangement being such that, at a low speed, the colors will mingle so as to produce the appearance of the preferred color, and starting from a higher speed, a white uniform color  
 65 will make its appearance by the total fusion of the seven or eight colors used. By combining such an application with the white color, a very light intermediate color, say red, green, etc. will be obtained, as also a  
 70 very clear white color when the total fusion is reached.

In a preferred form of embodiment, the solid discs constituting the wheels of a motor-  
 75 car, or an individual rotatable disc pivotally mounted on the car body, could be divided in a certain number of sectors, each of which is to be colored or painted in radial stripes of suitable area, without or with the white  
 80 color, in order to obtain the fusion of the seven colors, without or with the white color, for a predetermined speed, producing thus the appearance of a sufficiently clear white coloration. Said discs could, however, also  
 85 be colored after any geometrical design, as for instance in helicoidal or serpentine stripes starting from the centre of the wheel or disc, in successively disposed colored squares, in circles judiciously distributed upon the surface to be covered, always main-  
 90 taining a normal combination of the seven fundamental colors of the white light, without or with the white color. A similar result can be obtained in applying a combina-  
 95 tion of the seven colors, without or with the white color in concentric circles upon the disc of the wheel or the separately driven disc. In the latter case, the technical effect would be somewhat different, in this way  
 100 that the white coloration will appear on the

left and on the right of the vertical diameter, whereas in the region surrounding said diameter the seven fundamental colors will remain apparent; the white coloration will be produced on the left and right of the centre over a zone that will increase in dimension in relation with the speed of the vehicle. All said different speeds can be predetermined.

All the combinations of the seven colors of the rainbow, without or, if preferred, with the white color, which have been mentioned in the preceding description can be applied to the outer surface of the vehicle (motor-car, railway-car, etc.) and produce the same visual effects, but at relatively higher speeds, which can be exactly predetermined.

Another improvement consists in combining on a vehicle different speed indicators allowing the different speeds reached by the vehicle to be ascertained. Each of the four wheels and different discs can be thus divided into sectors of different widths, which will be capable of indicating a predetermined different speed reached by the vehicle, each of these discs or wheels producing first a uniform red, yellow, green or blue color, or producing gradually the uniform white color. Consequently, each of these elements will be liable to indicate a different speed momentarily reached by the vehicle.

It will be understood that any number of such combinations can be realized, more particularly to produce the appearance of general colorings on different discs, combinations which will be modified continuously when the speed of the vehicle or the separate elements increases.

Horizontal streaks or bands can also be applied to the car body of vehicles, said streaks or bands being divided in vertical bands each painted in one of the seven or eight above-mentioned colors. The dimensions of said colored bands are variable so as to produce for each speed the appearance of different colors, and at the end of a maximum speed, the appearance of a white color.

Another improvement consists in the provision as combined speed indicator of discs divided in three or more concentric bands, the central division being painted for instance in a uniform color, the next division being painted in the seven fundamental colors by dividing it in radial stripes, and the other division being painted in a uniform color. This arrangement allows the appearance of different combinations of colors forming cockade and imitating for instance the colors of the flags of different countries to be obtained on a rotary disc. This result can also be obtained by applying on the three mentioned divisions of the disc the seven fundamental colors according to any geometrical design whatever, with or without the

help of the white color, a disc of this kind presenting the advantage of forming cockade for a predetermined speed and forming a white disc for a higher determined speed.

The invention can be applied as well as to tram-cars, railway-cars, as to motor-cars in general and the four surfaces of the car body can be coated with stripes, bands, helicoidal or serpentine stripes, or any other geometrical design of suitable dimensions, so as to produce for each speed reached by the vehicle say a uniform color, say the white color or a greyish white color.

The different combinations hereabove mentioned will avoid the difficulty and the hesitations which occurred heretofore to determine the extension to be given to each color in its sector or subdivision. It will be sufficient to apply the colors somewhat according to their normal distribution in the solar spectrum, all the errors being eliminated by the use of the white color or by simply reducing the surface of the different colors used.

The vehicles, more especially the motor-cars, painted according to the above device will present the advantage to have a brilliant and beautiful coloration at every moment, say at stopping, when all the colors will be visible, say when rolling, while the coloration of the vehicle gradually changes.

Cars coated after the present method will offer the advantage that their speed can be controlled by spectators and almost by the people inside the car, when for instance two cars are crossing on the road. In the case of accidents, the speed at which a car was driven can be easily ascertained by witnesses, which will not be influenced by any of the parties as there can only arise discussion about the appearing coloration at the moment of the accident.

The accompanying drawings are given by way of an example to illustrate different embodiments of the invention. In these figures, numerals 1 to 7 are used to indicate the different fundamental colors of the solar spectrum, while numeral 8 is to indicate the white color.

Fig. 1 is an elevation view of part of a car-body painted according to the invention;

Fig. 2 is a view of a disc divided in concentric circles and painted according to the invention;

Fig. 3 is a view of a disc painted in a different way according to the invention;

Fig. 4 is an elevation view of part of the outer surface of a vehicle divided in parallel bands and painted according to the invention.

On Fig. 1 an example of the coating of a car-body surface with the seven fundamental colors and the white color is shown.

On Fig. 2 a disc with three concentric circles A, B, C is illustrated. A can be painted in a uniform color, say blue; B can be divided in a number of radial stripes painted

in the seven colors of the rainbow; C can be divided into seven compartments also painted in the seven colors of the rainbow with the red color and the adjoining colors predominating. When rotating, this disc will appear, for a determined speed, to be colored with the colors of the French flag.

Fig. 3 is another view of a disc divided in concentric circles. In this case, the outer circle is also divided in a certain number of radial stripes, not necessarily corresponding to the stripes of the intermediate circles and the white color is added between each series of seven colors.

Fig. 4 shows part of the outer surface of a motor-car, railway-car, or the like, divided in two parallel horizontal bands, the lower band being divided into vertical stripes painted with the seven colors of the rainbow, the upper horizontal band being divided into narrower vertical stripes painted with the seven colors of the rainbow with the white color between each of the seven colors. The upper band will appear to be white for a lesser speed than the lower band and the device thus constitutes a combined speed indicator, indicating different speeds reached by the vehicle.

I claim:

1. In a vehicle, a rotatable disc and driven by active parts of the vehicle, divided in concentric rings, each of said rings being colored with a combination of the seven colors of the spectrum, in combination with the white color, the arrangement being such that one of the seven colors will become visible on each ring starting from a predetermined speed different for each ring and that the white color will replace said one color starting from a higher predetermined speed different for each ring.

2. In a vehicle, a rotatable disc driven by an active part of the vehicle and divided in concentric rings, a number of said rings being painted in a uniform color, the other rings being colored with a combination of the seven colors of the spectrum, in combination with the white color.

3. The method of painting the bodies of power driven vehicles and disc wheels of same by means of the seven colors of the solar spectrum, characterized by the combination with said seven colors of the pure white color arranged between consecutive series of said seven colors, the arrangement of all the colors being made in such size and design that the bodies or wheel discs appear to be white when, by the proper speed of the vehicle, visual fusion of the colors will occur, whereby a predetermined speed will be witnessed.

4. The method of painting the bodies of power driven vehicles and disc wheels of same by means of a combination of the seven colors of the solar spectrum with pure white,

the arrangement being such that, starting from a certain predetermined speed, the painted surface will appear uniformly colored in one of the seven colors of the spectrum, substantially as described.

5. The method of painting the bodies of power driven vehicles and disc wheels of same by means of the seven colors of the solar spectrum, characterized by the combination with said seven colors of the pure white color arranged between each of the seven colors successively, the arrangement of all the colors being made in such size and design that the bodies or wheel discs appear to be white when, by the proper speed of the vehicle, visual fusion of the colors will occur, whereby a predetermined speed will be witnessed.

6. The method of painting the bodies of power driven vehicles and disc wheels of same by means of a combination of the seven colors of the solar spectrum with pure white, such color combinations being arranged in variable size and design over different zones, so that for a number of predetermined speeds, variable colorations up to the white will appear in said zones.

In testimony whereof I signed hereunto my name.

EMILE VAN REETH.

95

100

105

110

115

120

125

130