Aug. 21, 1928. 1,681,349

P. A. KRAUSE

ILLUMINATED VEHICLE LICENSE TAG AND HOLDER FOR SAME

Filed April 22, 1926 2 Sheets-Sheet 1

FIG 1

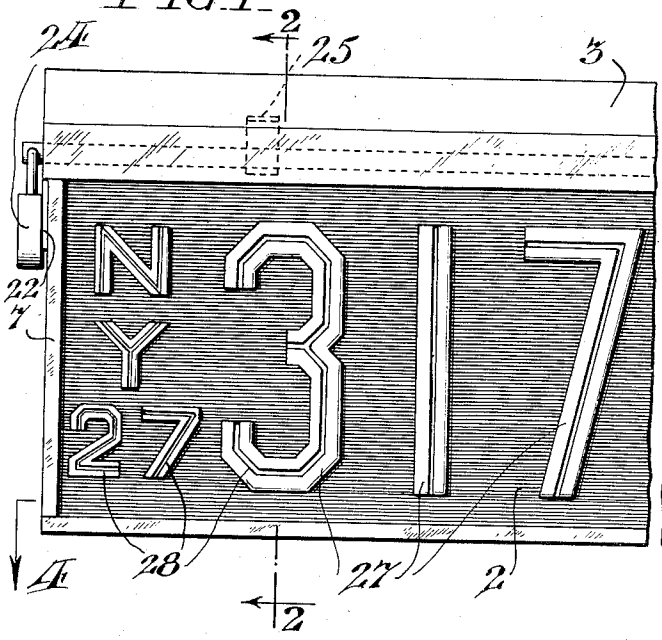


FIG 1a

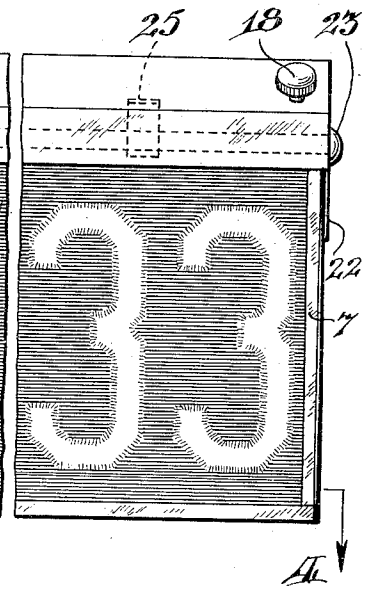
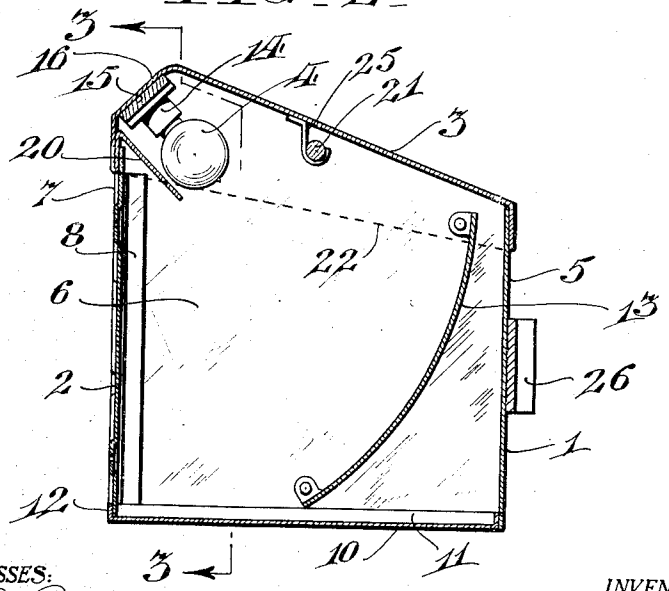


FIG 2



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FIG. 3.

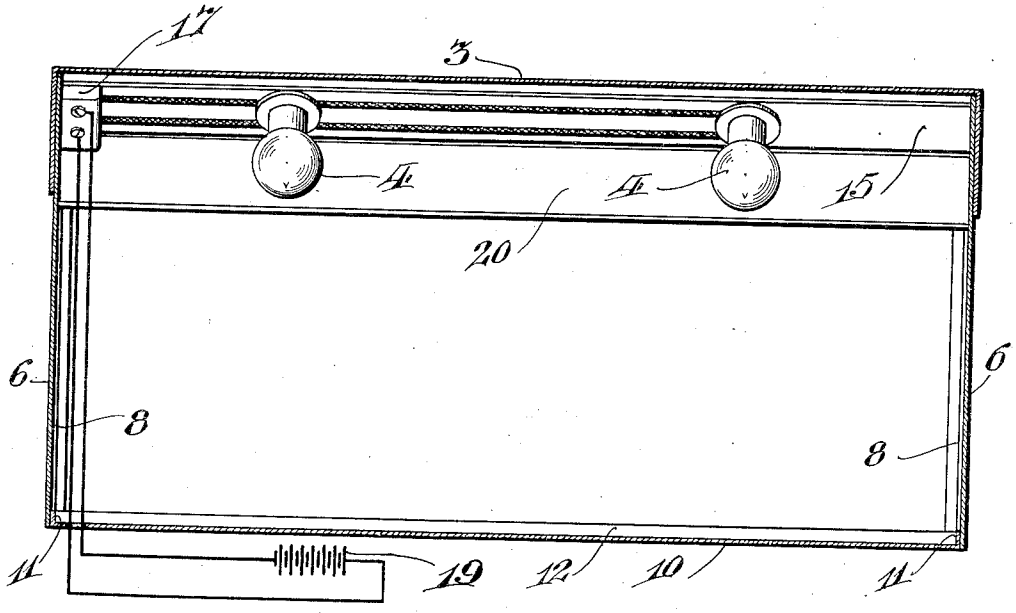
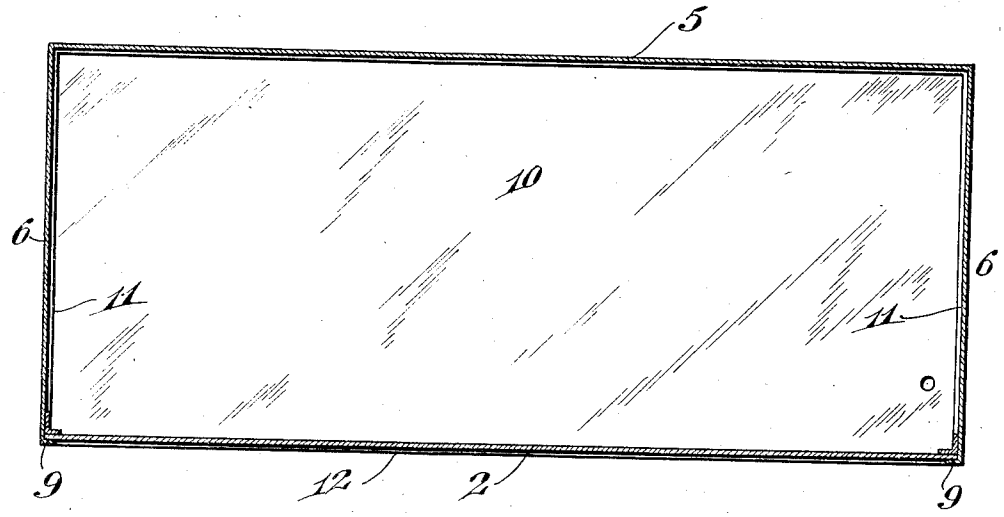


FIG. 4.



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UNITED STATES PATENT OFFICE.

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ILLUMINATED VEHICLE LICENSE TAG AND HOLDER FOR SAME.

Application filed April 22, 1926. Serial No. 103,710.

This invention relates to illuminated vehicle license tags and holders for the tags, especially adapted for use on automobiles.

The present day license tag, as is well known, is not sufficiently illuminated by night to enable a person to discern the number of the tag at a distance. Stenciled license tags and holders have been proposed to remedy this fault but were found unsatisfactory.

The chief objection to the ordinary stenciled license tag is that it precludes making the tag of two colors, that is the number of one color and the body of the tag of another color. To retain the two color effect of a license tag colored glass plates were used in rear of the tag so that colored light would pass through the stenciled numbers, thus making the numbers appear as of a distinct color from the remainder of the tag. While this scheme worked well by night, it was wholly unsatisfactory by daylight, because it was difficult to distinguish the color of the glass plate especially when it was of one of the dark colors, unless the plate was illuminated from the rear.

Another objection to the ordinary stenciled license tag is that the light passing through the number diffuses to such extent, when viewed at a distance, that the outlines of the number are obliterated.

The objects of my invention are to provide a stenciled license tag which may be readily made of two colors, the numbers of one color and the body of the tag of another; which dispenses with the use of colored glass plates and which, when illuminated and viewed at a distance by night, the number of the tag will appear in distinct outline; and to provide a holder for the tag which will thoroughly illuminate the same, and which may be readily stamped from sheet metal and produced at low cost.

These objects, and other advantageous ends which will be described hereinafter, I attain in the following manner, reference being had to the accompanying drawings in which

Figure 1 is a front view of a portion of a license tag and holder made in accordance with my invention when viewed close up,

Figure 1ª is a front view of the remaining portion of the license tag shown in Figure 1, illustrating the appearance of the characters when viewed from a distance,

Figure 2 a sectional view taken on line 2—2 of Figure 1,

Figure 3 a sectional view taken on line 3—3 of Figure 2, and

Figure 4 a sectional plan taken on line 4—4 of Figure 1.

Referring to the drawings, 1 indicates a casing open at its front and top, 2 a license tag mounted in and closing the front of the casing, 3 a lid secured to and closing the top of the casing and 4 electric bulbs mounted on the lid for illuminating the tag.

The casing is preferably made by stamping and bending sheet metal to form a back 5, sides 6 and side flanges 7 which with a pair of small angle bars 8 secured to the sides, form grooves 9 within which the license tag is slid into the casing and held in position. A bottom 10, also stamped and formed from sheet metal, has flanges 11, for securing it to back 5 and sides 6, and a front flange 12 which abuts the lower ends of flanges 7 and keeps the lower edge of the license tag within the casing. A reflector 13 is secured within the casing to the sides 6 in such position that light emitted from the bulbs 4, will be reflected in substantially parallel lines against the rear of the license tag.

Lid, 3, stamped and formed from sheet metal, fits the casing with the edges well down over the walls of the casing. Bulbs 4 are mounted in sockets 14 secured to an insulated base 15 fastened to an offset part 16 on the lid. The sockets are electrically connected with a switch 17 which has a knob 18 extending out of the lid, by which the switch may be turned on and off from outside the casing. Suitable electrical connections may be made from the generator or battery 19 of an automobile to the switch. An inclined guard 20 extends from the front part of the lid and protects the electrical parts from rain which is likely to be blown in between the lid and the tag, especially when the tag is bent out of shape. The guard also prevents stray rays of light from passing to the license tag.

The lid is locked to the casing by a rod 21 passing through the depending flanges 22 of the lid and sides 6 of the casing. A head 23 on one end of the rod and a lock 24 attached to the other end prevent an unauthorized person from removing the rod and opening the lid. Clips 25 on the under

side of the lid guide the rod as it is slid through the opening in one side of the casing to the opening in the other side. A suitable bracket 26 may be secured to the back of the casing for attaching it to a vehicle.

The license tag is made from sheet metal, and has letters 27 embossed and slits 28 in the center of the embossed parts. For best results the slits should be about ⅓ of the width of the embossed parts and of substantially the same length. The letters are painted one color and the remainder of the tag another color.

A license tag mounted in a holder as shown in Figure 1 may be clearly seen and its colors and numbers readily distinguished in daylight. At night when illuminated the light from bulbs 4 is reflected in substantially parallel lines through the narrow slits 28. At a short distance the tag appears as of two colors, the body of one color and the letters another color, and the slits appear as narrow but sharp and bright letters as shown in Figure 1. When viewed at a long distance the slits appear as being of substantially the same width as the embossed letters, as indicated in Figure 1ª. This effect is due to the diffusion of light when viewed at a long distance and to an optical illusion.

Switch 17 being mounted on the tag holder compels the driver to get out of the vehicle and go to the rear thereof to turn the switch off, should he desire to extinguish the lights illuminating the tag. This will aid a lawful pursuer in obtaining the number of the license tag.

From the foregoing it will be seen that I have produced a stenciled license tag which may be made of two colors, and which dispenses with colored glass plates. The holder firmly keeps the tag in position and prevents an unauthorized person from removing the tag.

While I have described my invention as taking a particular form, it will be understood that the various parts may be changed without departing from the spirit thereof, and hence I do not limit myself to the precise construction set forth, but consider that I am at liberty to make such changes and alterations as fairly come within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. A license tag holder including a casing consisting of a piece of sheet metal bent to form a back, sides and inwardly extending flanges on the sides; angle bars secured to the sides adjacent the flanges to form grooves therewith; a bottom, having an upwardly extending flange, secured to the back and the sides with the flange abutting the flanges of the sides; a license tag mounted in the grooves with the lower edge of the tag in rear of the bottom flange; a lid on the sides and back of the casing and extending below the upper edge of the license tag; a reflector secured within the casing to the sides thereof, and illuminating means mounted on the lid.

2. A license tag holder including a casing consisting of a back piece, sides having inwardly extending flanges, said sides being integral with the back piece, a bottom having flanged edges for securing it to said sides and back, said bottom having an upwardly extending flange adapted to co-operate with the flanges on the sides to mount a license tag adapted to act as the front side of the holder, an arcuate reflector within the holder secured to the sides; a lid having illuminating means mounted therein to co-operate with said arcuate reflector and adapted to deflect the rays from said means in a horizontal direction, narrow slits in the tag for allowing the light to display the characters on the tag, and a guard for protecting said illuminating means from matter blown through said slits.

3. A license tag holder comprising a bottom having extensions for securing the sides and back thereto, a projection on the bottom and projections within the sides for mounting a license tag with its lower edge in rear of the projection on the bottom, the tag constituting the front side of the holder with its upper edge higher than that of the back of the holder, a lid and illuminating means within the lid adjacent the tag, the bottom of said means being at substantially the level of the top edge of the tag and positioned above the top edge of the back of the holder, arcuate means secured within the holder for reflecting the light from the illuminating means in substantially horizontal beams through slits in the characters of the tag, and a guard for protecting the illuminating means from water blown through the slits.

In testimony whereof I have signed my name to this specification.

PAUL A. KRAUSE.