

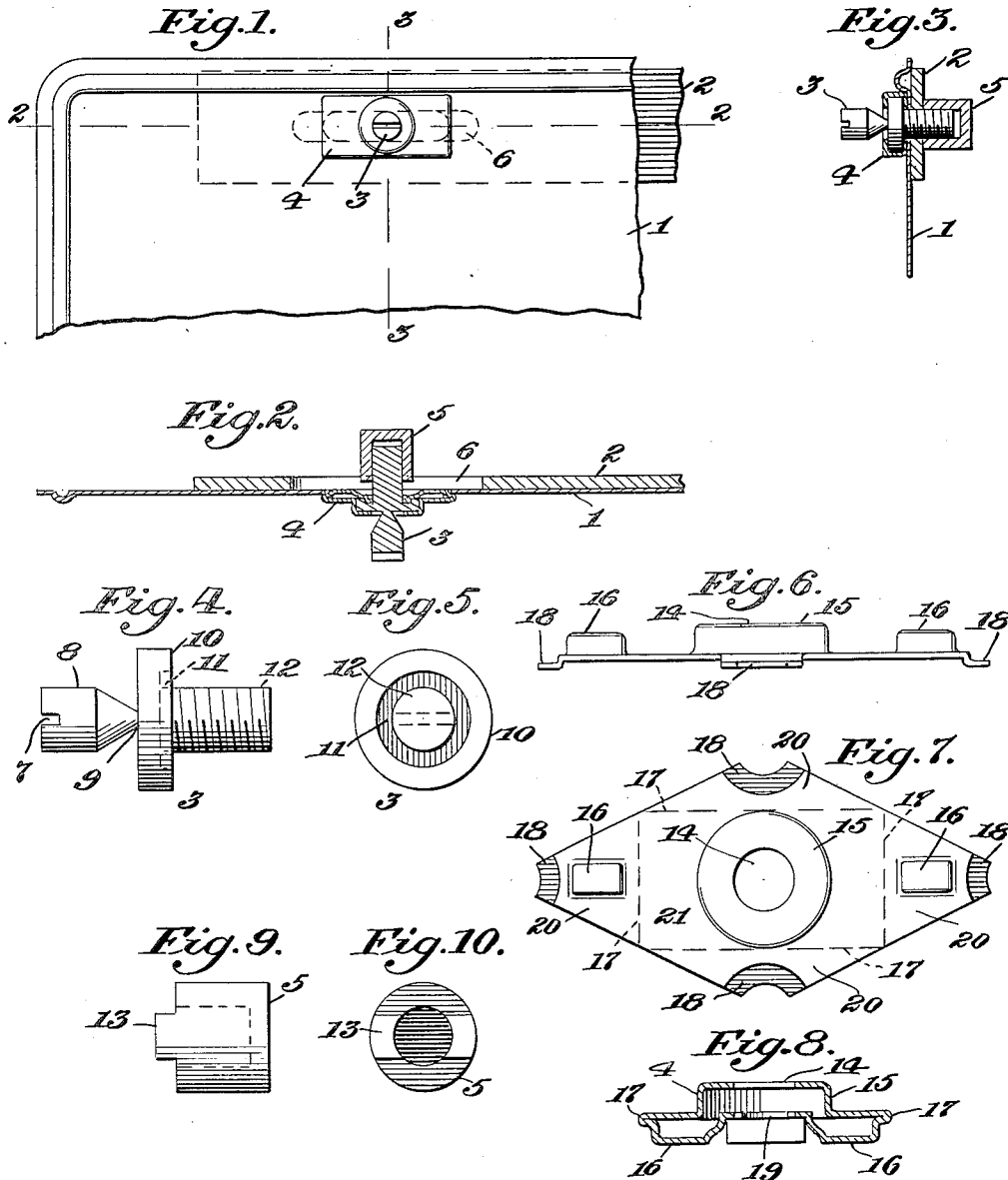
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NONREMOVABLE DISPLAY DEVICE

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NONREMOVABLE DISPLAY DEVICE

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8 Claims. (Cl. 40—125)

My present invention relates to a method and device for securing automobile license tags and the like in display position in such manner that they cannot be removed without destruction of the tag itself, so that it no longer can be used.

Briefly stated, my device consists of the combination of a screw or bolt having a frangible head, together with a skirt portion, preferably having an annular recess therein, this screw or bolt cooperating with a nut having a rounded exterior. Surrounding the skirt so as to prevent access thereto is a screw housing formed of a single sheet of metal, properly folded and embossed to prevent movement both of itself and of the bolt after the latter has once been seated.

One form of my invention is shown by way of example in the accompanying drawing, wherein:

Fig. 1 is an elevation showing one corner of a license tag and holder and depicting the assembly of the license tag with my new device.

Fig. 2 is a longitudinal section and Fig. 3 a transverse section through the device of Figure 1, along the lines 2—2 and 3—3, respectively;

Fig. 4 is an elevation of a screw or bolt according to my invention, while Fig. 5 is a bottom plan view thereof.

Fig. 6 is a side view and Fig. 7 a top plan view of a development of the screw housing, while Fig. 8 is a section through the assembled housing, the bolt and the skirt being omitted for clarity;

Figs. 9 and 10 are respectively side and plan views of the nut which I prefer to employ.

If desired the screw housing may have embossed on its face any desired identifying indicia such as the abbreviation of a state name or numerals representing the year.

Referring to Figs. 1—3 a tag 1 is mounted on a holder 2 by means of my new device. The holder 2 has an elongated slot 6, while the tag has a slot of lesser extent. To secure the tag in the holder use is made of a screw or threaded bolt 3 which threads into a nut 5 having an exterior surface which preferably but not necessarily is of circular or other continuous section and preferably is closed at its end opposite the bolt or screw. When in position, the greater extent of the rim of the nut snugly abuts the rear side of the holder 2, but ears 13 on the nut 5 enter into the slot 6 and fix the nut against rotation.

The screw 3 is shown as having a head 8 with a slot 7 therein. This head has a portion of reduced section 9, and upon driving the screw in the object in which it is to be seated until sufficient resistance is encountered, the head will shear at the point 9, so that it is no longer possible to turn the

screw in either direction. Between the screw threads 12 and the portion 9 of the reduced section a skirt 10 is provided, preferably having an annular recess 11 in the face disposed towards the screw threads, for a purpose to be disclosed later.

The screw housing of Figs. 6—8 is shown as being formed of a single piece of metal, folded along the lines 17 of Figs. 7 and 8. Thus the blank is substantially diamond-shaped, and the outer portions 20 thereof are folded along lines 17 forming a rectangle, and intersecting the edges of the blank substantially at their midpoints. Embossments 15 and 16 and indentations 18 are preferably struck upon the blank and a hole 14 for the bolt 3 is provided in the embossment 15, in the center of the blank. The embossments 16 are preferably disposed along the major axis of the diamond-shaped blank, then when the blank is folded as in Fig. 8, the screw or bolt 3 passes through the aperture 14 of the embossment 15 and through the opening 19 defined by the indentations 18, the skirt 10 of the bolt or screw being received in the central space defined by the upper and lower surfaces of the folded blank and the recess 11 of the said skirt 10 receiving the indented portions 18, as in Fig. 2. The protuberances or embossments 16 engage in the slot of the tag, and prevent relative movement between the tag and the screw housing.

To use my new device, a housing blank is slipped about the head 8 of a screw 3, with the convex face of the embossment 14 disposed outwardly, whereupon the blank is folded into the position of Fig. 8. The bolt or screw 3, together with its housing, is then inserted from the front, through a tag 1 and holder 2, so that the protuberances 16 engage in the slot of the tag 1. At this time the nut 5 is applied from the rear of the holder 2 so that its ears 13 engage in the slot 6 of the holder, and so that its threaded aperture engages with the threads 12 of the screw 3, whereupon threading of the screw or bolt 3 therein will result eventually in shearing the head 8 at the portion 9.

At such time, since relative motion between the several parts is prevented by the engagement of the embossments 16 and ears 13 in their respective slots, and since the housing thoroughly protects the skirt 10 of the screw 3, no access can be had to the screw or bolt until the tag is removed, an action which cannot take place without the total destruction of the tag itself.

Once the broad aspects of my invention are disclosed, numerous modifications and adaptations will readily occur to those skilled in the art, and

accordingly my invention is to be limited only in the light of the appended claims.

I claim:—

1. In a non-removable display sign assembly having a housing with indented portions thereon, a screw or bolt having a head portion and a threaded portion and a skirt between said two portions, and having an annular recess on its face adjacent the threads into which certain of said indented portions are received when the housing is mounted on the screw or bolt, to prevent access to and destruction of the housing, said head portion having a greatly reduced section adjacent said skirt.

2. In a non-removable display sign assembly having a frangible-headed screw and a cooperating nut having an exterior wall of a smooth, continuous surface for holding a display sign to a bracket, a blank for a housing for fitting about and concealing the joint between the screw and nut, comprising a substantially diamond-shaped piece of metal having its corners cut away in the form of arcs, and having a central aperture.

3. The method of forming a housing for a non-removable display sign assembly, comprising cutting a diamond-shaped blank from a single sheet of metal, forming a central aperture therein, cutting the corners into arc-shape form, and folding the outer portions of said blank along four lines forming a rectangle between them and intersecting the edges of said blank substantially at their midpoints.

4. As an element of a non-removable display sign assembly having a frangible-headed screw and a cooperating nut having an exterior wall of a smooth, continuous surface for holding a display sign to a bracket, a blank for a housing for fitting about and concealing the joint between the screw and nut, comprising a substantially diamond-shaped piece of metal having its corners cut away in the form of arcs, and having a central aperture, a central embossment defining said central aperture, additional embossments disposed along one of the axes of said blank, and indentations defining the arc-shaped corners of the blank.

5. As an element of a non-removable display sign assembly, a screw-housing comprising a substantially rectangular member having an upper surface having a raised central portion with central aperture therein, and a bottom surface joined

to said upper surface having a central indented apertured portion recessed in and cooperating with but spaced from said raised central portion.

6. As an element of a non-removable display sign assembly having a frangible-headed screw and a cooperating nut having an exterior wall of a smooth, continuous surface, for holding a display sign to a bracket, a screw housing for fitting about and concealing the joint between the screw and the nut and formed of a single piece of metal, and comprising a top surface having an apertured, raised central portion, and a bottom surface having an indented central apertured portion cooperating with but spaced from said raised central portion, and raised embossments on the outer portion of said bottom surface.

7. A non-removable display sign assembly, comprising a display sign having a slot therein, a slotted holder therefor, a skirted screw passing through said slots and having a head portion of reduced section, a screw housing fitting about and protecting the skirt of said screw and of substantially the dimensions of the skirt, and a smooth and continuous surfaced nut, separate from said housing and closed at one end, into which said screw threads, said nut so cooperating with the slot of said holder that it cannot rotate, shearing of the screw at its portion of reduced section thus preventing removal of the display sign without the destruction thereof.

8. A non-removable display sign assembly, comprising a display sign, having a slot therein, a slotted holder therefor, a skirted screw, passing through said slots, and having a head portion of reduced section, the skirt of said screw having an annular recess in the face adjacent the threads of the screw, a screw housing fitting about and protecting the skirt of the screw, said housing being formed of a single piece of metal, and having an upper embossed portion fitting about the outer face of said skirt, and a lower folded portion concealed by said display sign and having embossments fitting in the slot of said display sign to prevent rotation of the housing, and having indentations received in said recess of the screw, to prevent removal of the housing, and a nut threaded on said screw from the rear of said holder and having ears engaging in the slot of the latter.

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