Feb. 13, 1945. G. A. TINNERMAN 2,369,380

FASTENING DEVICE.

Filed June 8, 1942

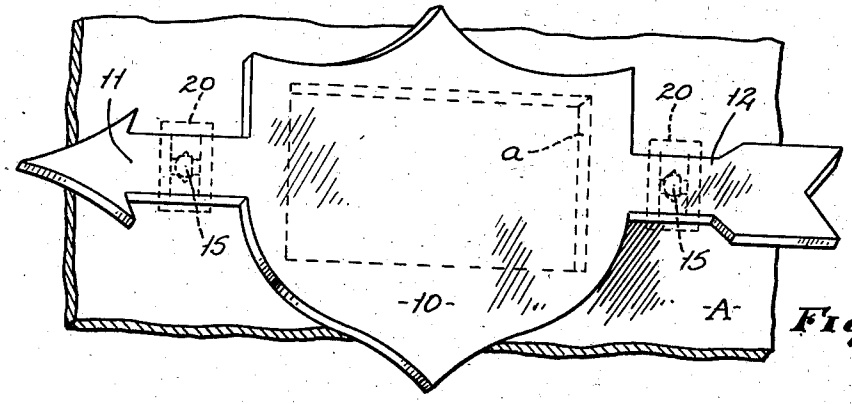


Fig. 1

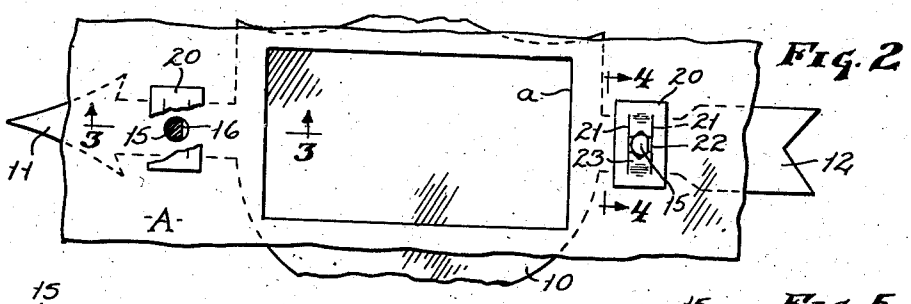


Fig. 2

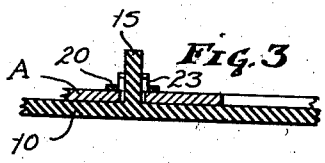


Fig. 3

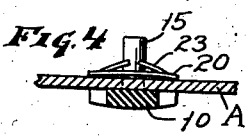


Fig. 4

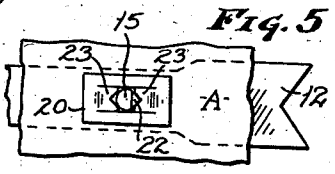


Fig. 5

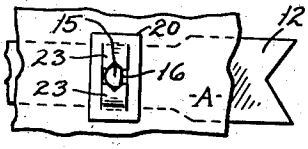


Fig. 6

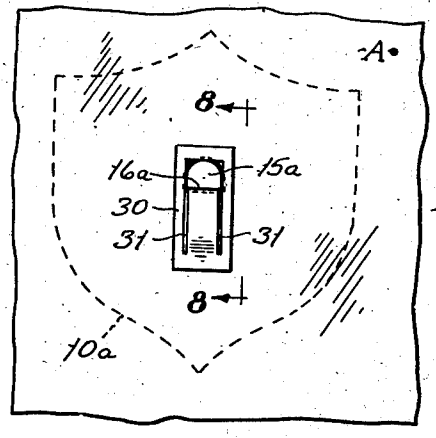


Fig. 7

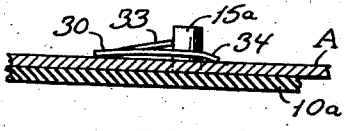


Fig. 8

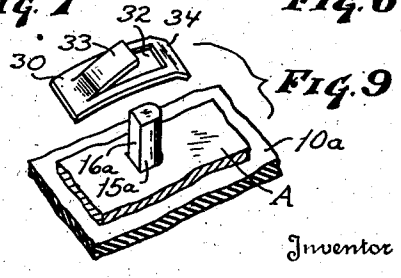


Fig. 9

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FASTENING DEVICE

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Application June 8, 1942, Serial No. 446,247

2 Claims. (Cl. 85—36)

This invention relates to an escutcheon plate associated with suitable means for mounting it on a support. More particularly, I contemplate using the plate as a removable closure to cover an opening in a supporting plate. For instance, my applied plate may carry a name or suitable symbol and is formed with an artistic contour so that it may be applied as an ornament across the opening intended for a radio dial, clock or other instrument on an automobile instrument board. My applied plate is provided with one or more studs each adapted to extend through the instrument board or other support, and, at the back of the support, to receive a retainer bearing against the support and having a spring tongue to interlock with the stud.

The stud of my applied plate may be flattened on one side, enabling the retaining device to be readily put over the stud by reason of the reduced cross section provided by the flattening and then giving a quarter turn to bite into the stud and hold it in place; or the fastener may be of a form adapted for positioning by direct pressure toward the back of the support.

Two embodiments of my invention are illustrated in the drawing hereof and are hereinafter more fully described, and the essential novel features are summarized in the claims.

In the drawing, Fig. 1 is a perspective of my escutcheon plate of substantially shield-shape applied to a suitable support, as for instance, the instrument board in an automobile; Fig. 2 is a rear elevation thereof looking at the inner side of the instrument board; Figs. 3 and 4 are fragmentary cross sections on the correspondingly numbered lines on Fig. 2; Fig. 5 is a fragmentary face view looking from the rear, showing the position of the fastener as the device is first put in the position and before completion of the installation; Fig. 6 is a similar view illustrating the fastener in locking position; Fig. 7 is a rear elevation of an instrument board having another shield-shaped escutcheon plate and a different form of fastener for holding the same; Fig. 8 is a cross section indicated by the line 8—8 on Fig. 7; Fig. 9 is a perspective of the applied stud of Fig. 7 and the fastener ready for application thereto.

In each of the figures, A indicates a suitable support which may be the instrument board of an automobile. This instrument board may have an opening *a* (Figs. 1 and 2) of considerable size therein, intended for the mounting of a radio, clock or other instrument, and my applied escutcheon plate is adapted to cover this opening; or the supporting panel may be substantially continuous, as indicated in Fig. 7. In either case the escutcheon plate is held in place by one or more studs extending through the support and carrying fastening devices coacting with the rear face of the support.

I will first describe the embodiment shown in Figs. 1 to 6 inclusive. In these views 10 indicates an escutcheon or nameplate shown as having lateral extensions 11 and 12, which for ornamental purposes may be made to indicate the barb and feather of an arrow, as shown in Figs. 1 and 2. The escutcheon plate carries a pair of rearwardly extending studs 15, preferably extending from the narrowed end portions of the plate. Each of these studs is cylindrical for the most portion but is flattened on one side, as indicated at 16. These studs extend through circular openings in the instrument board and project at the rear thereof, as indicated in Figs. 3 and 4.

The fastening members which engage the studs of this embodiment on the rear side of the instrument board are designated 20. These fastening members are strips of sheet metal having parallel slits 21 and central space 22 extending from slit to slit to provide a pair of opposed tongues 23. These tongues are bent up obliquely in opposite directions, as shown in Figs. 3 and 4, the tongues being notched in their ends and adapted to bite into the studs, as illustrated particularly in Fig. 4.

As shown in Fig. 5, the space 22 between the ends of the opposed tongues is sufficient so that the fastener 20 may be readily slipped over the stud 15 with one tongue facing the flattened face of the stud and the other tongue diametrically opposite the same. The opening provides sufficient clearance so that the fastener may be put in this position without binding on the stud and hence not requiring pressure. After being thus placed the fastener is given a quarter turn in its own plane to bring it into the position shown in Fig. 6, where the two tongues 23 bite into the opposed cylindrical portions of the stud and thus effectively hold it in position.

It will be seen that the escutcheon plate described may be mounted on the instrument board with great ease. It is simply put in place with the studs extending through the openings in the instrument board and the fasteners slipped over the studs. Then by a suitable wrench or a pair of pinchers applied to the fastener it is swung at

right angles to its original position and thus bites into the stud and locks the escutcheon in place.

In the embodiment of Figs. 7, 8 and 9, the escutcheon plate 10*a* is somewhat smaller than the one described and carries a single stud 15*a* centrally located and having a flattened surface 16*a*. This escutcheon plate may be placed on an instrument panel A which has an opening merely large enough to receive the stud 15*a*, and may be D-shaped, as shown, to prevent its rotation.

After the escutcheon plate 10*a* of Fig. 7 has been put in position, I force onto its stud a fastener which may be of the form shown at 30 in Figs. 7, 8 and 9. This fastener has a pair of slits 31 leading from near one end of the fastener to the edges of a rectangular opening 32 in the fastener. This leaves a tongue 33 terminating short of the end of the opening 32, which tongue is bent up obliquely to the body of the fastener, as shown in Figs. 8 and 9. The extreme end of the fastener beyond the opening 32 is preferably bent in the direction opposite the tongue, as indicated at 34.

The fastener is accordingly of the form shown in perspective in Fig. 9. It is shoved into place by direct pressure over the projecting stud 15*a* until it engages the back of the instrument board A and is nearly flat. This action bends the tongue 33 slightly away from the body of the fastener, so that its resilience, and that of the flattened base portion, causes the tongue to bite against the flat face 16*a* of the stud and thus lock the device in place.

Fasteners of the type shown in Fig. 9 could be employed on the studs of Fig. 2 if desired, being readily applied by being first mounted loosely on the studs and then forcibly shoved against the back of the instrument board until the body of the fastener is nearly flat and its ends snugly engage the instrument board and the tongue bites into the stud. Similarly, the fastener of Fig. 2 could be mounted on the stud 15*a* of the escutcheon of Fig. 7.

It will be seen that with either embodiment of my invention the escutcheon plate may be readily mounted on the instrument board and will be effectively held thereon notwithstanding a jarring of the board through the travel of the car. Whenever desired the escutcheon plate may be removed by giving a quarter turn to the fasteners of the first mentioned embodiment or by prying back the tongue 33 of the second embodiment.

I claim:

1. A fastener adapted to coact with a stud comprising a strip of resilient metal having a pair of parallel slits through it leading from opposite ends of an opening through the strip, said slits providing a single tongue attached to the body with a free end defining one edge of the opening, the opposite edge of said opening being provided by the body of the fastener itself, said tongue bent up at an acute angle to the body of the fastener, the end of the fastener away from the tongue being bent down in an oblique direction, on an axis substantially coincident with that of the opening to make said opposite edge sharp and to make the fastener base yieldable when in contact with a flat surface.

2. The combination of two fasteners as defined in claim 1 and a cover plate for mounting on the instrument board of an automobile or similar member having an opening to be covered and a pair of small holes beyond the opening, said cover plate shaped to cover the opening and having a pair of studs with a flattened face to extend through said holes, each fastener adapted to engage a stud by sliding the tongue axially along the flattened face and then rotating the fastener to bite into another side of the stud.

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