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(54) **Mounting device.**

(57) A saddle (2) is sandwiched between a signpost (10) and a base plate (23) of a yoke (12) whose arms (18) engage a coupling piece (30, 2; 52, 54) so as to embrace the post (10). The yoke (12) and coupling piece (30, 2; 52, 54) can be tightened about the post thus urging the saddle towards the base plate, so that an edge portion of a sign plate can be gripped between them, and rest on the arms (18). The arms (18) may grip the post (10) resiliently, or be quite short and have slots (50) for engaging a band (52) that extends around the post.

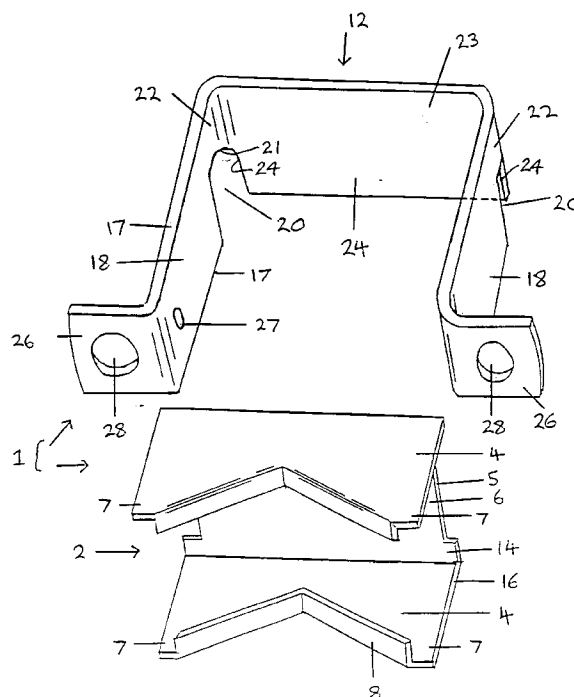


FIG 1

This invention relates to a mounting device for use in securing an object, such as a sign plate, to a post.

In a first aspect, the present invention provides a combination of a sign plate and a mounting device for securing the sign plate on a post, wherein the mounting device comprises: a yoke which is substantially U-shaped in cross section, having a base plate and an arm extending rearwardly at each end of said base plate; an abutment portion of the base plate projecting beyond the edges of the adjacent portions of the arms so that an edge portion of the sign plate can be located bridging the arms and abutting the said abutment portion; a saddle piece mounted to said yoke so as to be movable between a first position in which a front surface of said saddle piece is adjacent a rear surface of said base plate and a second position in which a said front surface is relatively remote from said rear surface, the saddle being urgeable between said second and first positions in use, thereby to secure the sign plate.

Suitably, the sign plate is provided with a frame around its edge, the frame having an in-turned lip projecting towards the rear of the sign plate and providing a flange extending parallel to the plate which is abutable with the abutment portion, so that it becomes secured when the saddle is urged from said second to said first positions. Alternatively, the sign plate may have no frame but may be provided with a rearwardly projecting lip which is integral with the sign plate and which likewise provides a flange locatable adjacent to the abutment portion. In these ways, the sign plate tends to conceal the base plate of the mounting device. It is also possible, however, that the sign plate may be a simple plate with no lip, in which case it may, nevertheless be mounted by securing a flat edge of the sign plate adjacent the abutment portion. The flat edge may be provided on a frame.

In a second aspect the invention provides a mounting device for use in such a combination according to the first aspect.

The arms of the yoke may be relatively high but with slots adjacent the base plate to provide said edges and define the projecting abutment portion.

The saddle piece may have portions that project into the slots, so that the length of the slots delimits the range of travel of the saddle piece between the first and second positions. The saddle piece may have portions that engage upper and/or lower surfaces of the arms slidably, to guide displacement between the first and second positions. If portions engage both upper and lower surfaces, they may serve to retain the saddle piece in engagement with the yoke.

The mounting device may be secured to a post by any suitable means. Preferably, the yoke is provided with connecting means for securing the device. For example, slots may be provided in the yoke to accom-

modate a strap. Alternatively holes may be provided for bolts to secure the device. Preferably, a surface of the saddle is abutable with the surface of the post when the saddle is in its second position and the action of securing the mounting device to the post urges the saddle towards its first position while maintaining contact of post and saddle surfaces.

In a third aspect the invention provides a mounting device for securing a sign plate to a post (generally of circular cross-section) comprising post-embracing means which comprise a first portion having a pair of arms which extend from a base region and are resiliently urgeable apart from a configuration in which opposed arm portions are spaced apart by a distance less than the diameter of a post; and a second portion for connecting the ends of said arms from said base region so that the first and second portions enclose a space; there being means for urging the first portion generally towards the second portion to reduce said space; whereby the device is mountable loosely embracing a post whereafter the portions are progressively urgeable together so that the arms resiliently engage the post with increasing force. Ultimately, the engagement may be such that the mounting device is essentially fixed (though this may be reversible). Desirably there is an intermediate stage in which the device engages the post with sufficient firmness to maintain its position, but in which it can be slid up and down to adjust its position. The first portion may provide sign coupling means. The second portion may be similar to the first portion.

In a fourth aspect the invention provides a combination of a mounting device according to the third aspect and a post.

In a preferred embodiment of the mounting device according to the third aspect of the invention the invention provides that portions of the arms intended to abut the post have means for protecting the post from friction damage during said height adjustment, e.g. blips or other projections.

In order that the present invention may be more clearly understood, and by way of example only, some embodiment will now be described, with reference to the following drawings in which:

FIG 1 shows an exploded perspective view of a single mounting device;

FIG 2 shows a plan view of two opposed mounting devices in a partially bolted arrangement;

FIG 3 is a perspective view of a yoke of a second embodiment; and

FIG 4 is a schematic top plan view of the second embodiment mounted to a post.

Referring firstly to Fig 1 and 2, a mounting device 1 comprises a channel shaped saddle piece 2 and a yoke 12.

The saddle piece 2 has upper and lower side elements 4 joined by a base element 6. The side elements 4 have edges 8 that are V-shaped and

in-turned so as to be able to seat against a post Fig 2. The side edges 5 of the base element 6 are cut away so that only a part 14 of each edge 5 extends as far as the edges 16 of the side elements 4. These extended portions 14 of the base element 6 keep the saddle piece 2 in position and limit its movement when it is mounted on the yoke 12.

The yoke 12 is U-shaped. It has a base plate 23 which is adjacent to the base element 6 of the saddle piece 2 when the latter is mounted on the yoke 12. Two rearwardly projecting lateral arms 18 on the yoke have cut away regions 20 in the region connecting them to the base plate 23, with radiused edge portions 21 extending to the base plate 23. These cut away regions 20 define an abutment portion 24 on the base plate 23 which is able, in a first position of the mounted arrangement, to abut against the front of the base element 6 of the saddle piece 2. In a second position the abutment portion 24 is not in contact with the base element 6, the size of the space between them being limited by the width of the cut away region 20 and the abutment of the extended portions 14 of the base element 6 with the rear edges of the cut away region 20. Lateral edge regions 7 of the side elements 4 on the saddle piece 2 overlie the top and bottom edges 17 of the arms 18 and serve to guide the movement of the saddle between these first and second positions.

An edge element of a sign plate, which may be part of a lip (which can be attached or integral) or simply a flat edge region of the sign plate, is able to slot into the recess between the abutment portion 24 of the yoke 12 and the base element 6 of the saddle piece 2 when the mounted arrangement is in the second position. The radiused edge portions 21 tend to deform the edge of the sign plate slightly, thus increasing resistance to lateral movement. Movement of the saddle piece 2 into the first position is achieved by fastening the mounting device 1 to the supporting post, so that the post tends to push the saddle deeper into the yoke.

In the embodiment shown in Figure 1 the yoke is provided with out turned end-plates 26 at the rear end of the arms 18. These endplates 26 have apertures 28 in them which allow the passage of a bolt. (Although shown as round, they may be square for use with coach bolts.)

This mounting device may therefore be fixed to the supporting post via a bracket passing around the post and connecting via bolts to the two endplates 26, tightening of the bolts urging the saddle piece against the post and thus urging the saddle to move into the first position. Thus an edge element of a sign plate located in the recess is clamped between the abutment position 24 and the base elements of the yoke. The width of the base plate 23, and hence the natural spacing of the arms 18, is desirably smaller than the width of the post to which the sign plate is to be fixed. Thus urging the arms to embrace the post

causes their resilient deformation. Thus as the bolt is tightened the arms grip the post with increasing force so that partial tightening of the bolts can be achieved to a point where the mounting device (with or without the sign plate) is firmly positioned but slidable up and down the post for height adjustment.

Blips 27 on the inside surface of the arms 18 of the yoke can prevent friction damage to the post during this height adjustment.

Fig. 2 shows an arrangement, where, instead of a simple bracket, a second mounting device is used to fix the first device to the post 10, tightening of the bolts connecting their corresponding end-plates 26 having the same effects as above. This enables a pair of sign plates to be mounted back to back.

Figs 3 and 4 show a second embodiment. This is very similar to the first, and corresponding elements have corresponding reference numerals. Again there is a channel-shaped saddle piece 2 which is urged deeper into a yoke 12 by contact with a post 10. However the arms 18 of the yoke are short, not extending rearwardly of the saddle piece 2. The arms 18 have slots 50 for passage of a flexible steel banding strap 52 that is passed around the post 10 and secured, suitably by a buckle device indicated schematically at 54. The arms 18 may have inwardly extending rear portions 56 so that the saddle piece 2 is not readily separable from the yoke 12, but can be handled with it as a single unit.

Claims

1. A mounting device (1) for use in mounting a sign plate, said device comprising: a yoke (12) which is substantially U-shaped in cross section, having a base plate (23) and an arm (18) extending rearwardly at each end of said base plate (22); an abutment portion (24) of the base plate projecting beyond the edges (21) of the adjacent portions of the arms so that an edge portion of a sign plate can be located bridging the arms (18) and abutting the said abutment portion (24); and a saddle piece (2) mountable to said yoke (12) so as to be movable between a first position in which a front surface of said saddle piece (2) is adjacent a rear surface of said base plate (23) and a second position in which said front surface is relatively remote from said rear surface, the saddle piece (2) being urgeable between said second and first positions in use, thereby to secure the sign plate.
2. A device according to claim 1 wherein the arms (18) of the yoke (12) are relatively high but with slots (20) adjacent the base plate (23) to provide said edges (21) and define the projecting abutment portion (24); and the saddle piece (2) has portions (14) that project into the slots (20), so

that the length of the slots (20) delimits the range of travel of the saddle piece (2) between the first and second positions.

3. A device according to claim 1 or claim 2 wherein the saddle piece (2) has portions (7) that engage upper and/or lower surfaces (17) of the arms (18) slidably, to guide displacement between the first and second positions. 5
4. A device according to any preceding claim wherein the arms (18) of the yoke (12) have slots (50) for accommodating a strap (52) for securing the device to a post (10). 10
5. A device according to any preceding claim wherein the saddle piece (2) has a rear surface (8) which, in use, is abutable with the surface of the post (10) when the saddle piece (2) is in its second position so that the action of securing the mounting device (1) to the post (10) urges the saddle piece (2) towards its first position while maintaining contact of post and saddle surfaces. 15
6. A device according to any preceding claim wherein the arms (18) of the yoke (12) are resiliently urgeable apart from a configuration in which opposed arm portions are spaced apart by a distance less than the diameter of a post (10); the device further including coupling means (1) for connecting the ends of said arms (18) remote from said base plate (23) so that the yoke (12) and coupling means (1) enclose a space for receiving a post (10); there being means (30) for urging the coupling means (1) and yoke (12) together to reduce said space; whereby the device is mountable loosely embracing a post (10) whereafter the yoke (12) and coupling means (1) are progressively urgeable together so that the arms (18) resiliently engage the post (10) with increasing force. 20
7. A sign assembly comprising a sign plate and a device (1) according to any preceding claim, said sign plate having a marginal portion dimensioned so that it can be gripped by the device (1) by locating it so that it bridges the arms (18), and clamping it between the base plate (23) and the saddle piece (2). 25
8. A sign assembly according to claim 7 wherein said marginal portion is provided by an in-turned flange portion which is behind the main body of the sign plate which thus substantially conceals the mounting device (1) when the sign plate is mounted to it. 30
9. A sign assembly according to claim 7 or 8 further 35

including a post(10); said saddle piece (2) having a rear post-engagement surface (8), and said yoke (12) having means (1; 52) coupled to its arms for embracing the post.

10. A method of mounting a sign plate to a post (10) by means of a mounting device (1) according to claim 6, wherein the device (1) is mounted so as to embrace the post (10) loosely; an edge portion of the sign is located on the arms (18) of the yoke (12); the yoke (12) and coupling means (1) are urged together sufficiently to grip the edge portion while permitting displacement relative to the post (10); the position of the device on the post (10) is adjusted by longitudinal slipping along the post (10); and the yoke (12) and coupling means (1) are urged strongly together to fix the position of the device on the post (10). 40

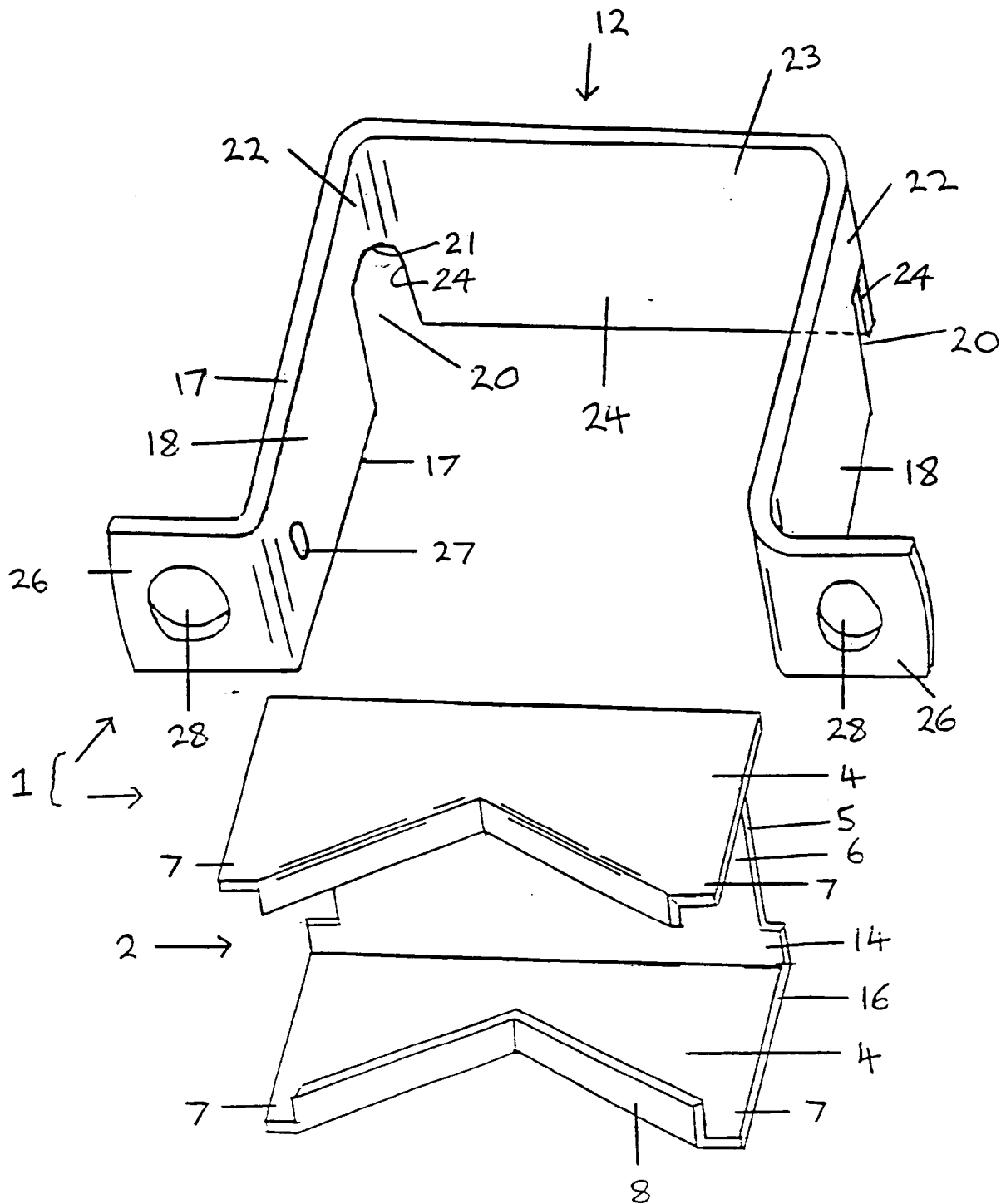


FIG 1

