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SIGN SUPPORT

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FIG. 1

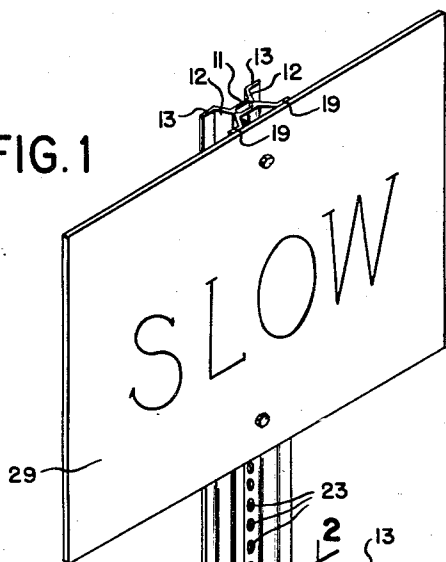


FIG. 3

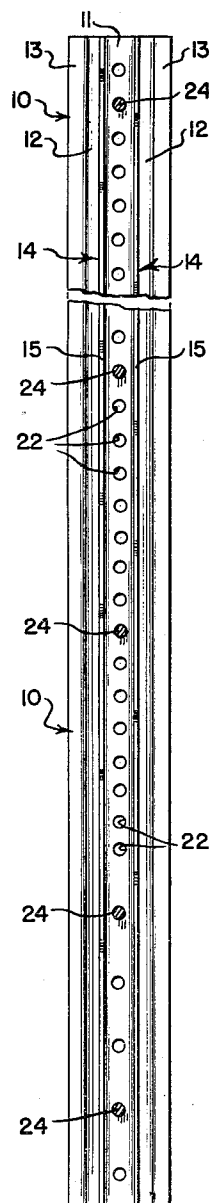
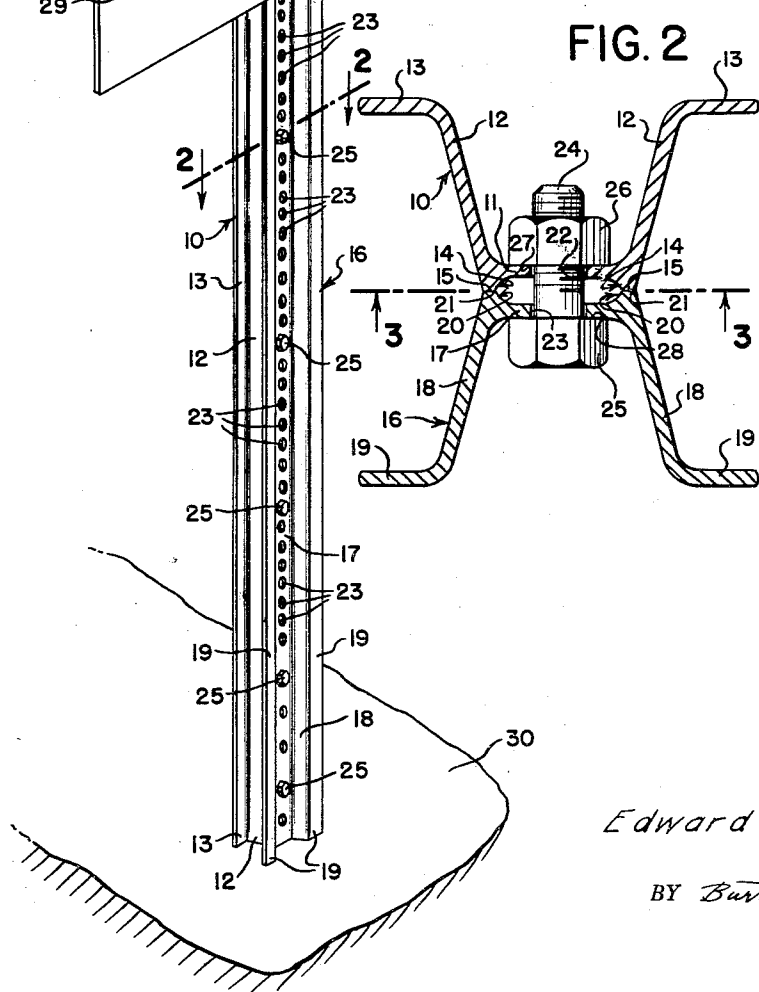


FIG. 2



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SIGN SUPPORT

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1 Claim. (Cl. 189—23)

This invention relates to posts and supporting members and more particularly to such structures suitable for use in the support of signs where the support is embedded in the ground.

Perhaps nowhere in the modern world is the use of signs so widespread as in the direction and regulation of automobile traffic. Not only is this true along today's great trunk highways, but as well at a high number of corners in virtually every settlement in the nation. Signs are not merely conveniences in pointing the motorist on his proper way, but downright necessities for the preservation of life and limb for pedestrians as well as other motorists. Because of this prevalence of the use of signs, it is desirable that their installation require as little effort as possible, and that they require as little maintenance as possible, after installation. These desiderata are vital not only in the name of economy, but also of permanence, for the absence of a sign where its presence is needed may be dangerous.

Working against permanence, and therefore against economy, with signs exposed to the attrition of the weather, is the natural phenomenon wind, which causes great difficulty. To minimize maintenance a firm mounting is required which can first, adequately support the sign and second, when bearing the sign, withstand the action of the wind. What is required of the mounting for minimum maintenance thus will depend upon the factors of sign weight, exposure, and height of mounting. These factors must be taken into account for in modern practice, signs are larger and are mounted higher in the air than heretofore. In the past, the use of signs of greater size and often of greater weight, mounted at greater heights has necessitated resort to the use of a plurality of mounting posts disposed at intervals in the ground and of extra bracing. Where such resort has been necessary, advantages of a single support have had to be sacrificed. Not merely does the single support give a trimmer appearance, but grass may be mowed closer to a single support, and obviously embedding a single support is far easier than where the same must be done for a plurality.

It is the primary object of the present invention to provide a support especially suitable for use in the mounting of signs which is extremely flexible in application and will give optimum results from the points of view both of installation and maintenance. A sign post of novel section is provided which strengthens the post when used alone, and also makes it a simple matter where added strength is required to achieve such strength by combining pairs of sign posts. The resulting combination support member possesses the advantages of a more complex section without the necessity for the separate fabrication thereof. Thus, in virtually all applications a single support may be used.

Another object herein is to provide a sign post which is economical of space in transport, yet which can give the advantages upon reaching its destination of a more

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complex shape. What is contemplated within this object is that sign posts may be nested for shipment, yet easily assembled into combination support members consisting of pairs thereof where such assembly is desirable, upon arrival.

A further object herein is to provide a signpost which may be paired with a second like signpost for additional strength. It is especially important that when such pairs of signposts made according to the present invention are combined, there will be mutual secure seating between them. This object is achieved by providing ribs on the signpost, such ribs having flat butting surfaces, such surfaces mating when pairs of posts are combined in a supporting member.

Still another object is to provide a signpost which may be used in combination with another signpost, and when so combined a strong union is assured. A signpost made according to the present invention has a web portion on one side of which ribs occur. These ribs are spaced in disposition on the web, and when pairs of signposts are combined, the respective ribs of the signposts are placed in abutment. The signposts are secured together in combination use, for example, by providing holes in the webs and passing bolts through aligned holes, securing this arrangement by nuts. By reason of the abutting spaced ribs which hold the webs spaced apart, the webs are rendered in a measure resilient, and tightening the bolt will effectively spring load the bolt. This has been found highly effective as a deterrent to loosening despite repeated stressing, and is a distinct advantage of the present invention. This same advantage can accrue even when a signpost according to the present invention is used alone, not in combination with another post, in securely retaining upon the post a sign mounted thereon.

As a still further object herein, it is contemplated that where combinations of signposts are used, combination is only necessary to the extent necessary to meet strength requirements in a particular application. Thus, a pair of signposts will give maximum combined strength when they are of equal length, but circumstances, while requiring strength greater than available with a single signpost, may yet not require the full strength of paired equal lengths. This situation may arise where a not overly heavy sign must be mounted at a considerable height. In such a case, one signpost in the pair would be of the full length required for the mounting height, while the other need be only paired at a bottom fraction of the first signpost, reinforcing the support only to the necessary extent.

A final object herein is to provide a signpost which may be fabricated in a variety of weights of section and to which, regardless of weight of section, the aforementioned advantages will accrue.

How these and many other objects are to be implemented will become clear through a consideration of the accompanying drawings wherein:

Fig. 1 shows a sign mounted on a support resulting from the combination of a pair of signposts having my novel section;

Fig. 2 is a section at 2—2 of Fig. 1; and

Fig. 3 is a section at 3—3 of Fig. 2.

In the drawings is shown a signpost 10 having a web portion 11, leg portions 12, and flange portions 13. Leg portions 12 and flange portions 13 extend from one face of web 11, while on the obverse face of web portion 11 occur a pair of spaced ribs 14. Such ribs 14 have flat surfaces 15. It will be appreciated that by reason of the presence of ribs 14, the signpost 10 is strengthened in its resistance to bending stresses, and therefore the signpost 10 having ribs 14 therein, has an inherent advantage when used alone.

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The signpost 10 may be unified with a second signpost 16, being in cross section like signpost 10, in having a web portion 17, leg portions 18, and flange portions 19. Again, on the obverse face of web portion 17 are a pair of spaced ribs 20 having flat surfaces 21. In the respective web portions 11 and 17 are series of similarly spaced bolt holes 22 and 23 respectively, and such bolt holes in each of the webs may be aligned. Upon such alignment a bolt 24 having head 25 may be passed therethrough, and the free end of the bolt engaged by nut 26. Bolt head 25 and nut 26 bear upon similar faces 27 and 28 of the respective webs. A plurality of such bolt connections may be made to secure the signposts together into a combination support member. By reason of the fact that flat surfaces 15 of ribs 14 abut against flat surfaces 21 of ribs 20, web portions 11 and 17 are spaced apart.

With web portions 11 and 17 so spaced apart and substantially parallel as seen in Fig. 2, when nut 26 is tightened upon the bolt 24, or the bolt is tightened within the unit to the extent that surfaces 27 and 28 of web portions 11 and 17 respectively react against the bolt head and the nut, the effect will be to spring load them. Experimental tests have shown that such loading of the bolt, which may be termed a "lock washer effect," is highly effective in maintaining the union between signposts 10 and 16 despite the repeated application and release of stress to the combination support member in simulation of stresses which may be expected in service due to wind action. Obviously, the same spring loading effect will occur when a sign is bolted to a single signpost made in accordance with the present invention.

Either a signpost such as signpost 10 alone, or the combination support member resulting from a union of signposts such as signposts 10 and 16, may effectively be used in the mounting of a sign, such as 29, by embedding the support in the ground 30. In either case, signs may be mounted on both sides of the support. Thus, where signpost 10 alone is used, a pair of signs may be backed upon flange portions 13 and also flat surfaces 15 of ribs 14, and may be secured in place by bolts through bolt holes 22. Signs double mounted on a single signpost in this manner will both have a real contact in two places, in one case by flange portions 13 and in the other by flat surfaces 15. That there is contact in two places is important, for thereby swing of the sign is prevented and mounting is more secure and durable. And that there is a real contact at each of such two places is important in that stress on the mounted sign is distributed to avoid a possible focus for deterioration of the sign which might result, for example, were contact with the sign made by a comparatively sharp edge.

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It is evident that a pair of signs may be mounted in like manner upon the combination support member resulting from combining signposts 10 and 16, as in Fig. 2. Thus, a pair of signs may be backed upon the respective flange portions 13 and 19, and the advantages just enumerated for such mounting on single signpost 10 will accrue.

While in the foregoing description, the use of bolts has been discussed as the means for securing signs to a single signpost used alone or to a combination support member consisting of a pair of signposts, other expedients may be employed to achieve this end. For example, flange portions 13 may be engaged by a channel or clamps fabricated in the rear of the sign to be mounted. Obviously, further modifications and changes can be made in the present structure as here specifically described, and the structure resulting from such modification or change would still be embraced within the ambit of the present invention.

I claim:

An elongated signpost having a substantially flat web portion with at least one bolt hole therethrough, a pair of leg portions projecting from the side edges of said web portion on one face thereof and terminating in outwardly extending side flanges, a pair of spaced longitudinally continuous ribs projecting from the other face of said web portion, one of said ribs being disposed at each side edge of said web portion and each of said ribs terminating in a flat surface, said ribs extending away from said web portion, said flat surfaces being in the same plane parallel to said substantially flat web portion of said signpost and in spaced relation therefrom, whereby said flat surfaces of said ribs may be squarely seated against the flat surfaces of the ribs of an identical signpost and retained squarely seated by passing a bolt through said bolt hole in said web portion and a registering bolt hole in the web portion of said identical signpost, engaging said bolt by a nut and tightening said bolt against said web portion, said bolt and said nut being spring loaded by the spaced parallel web portions of said signposts to inhibit loosening of said bolt under stress.

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