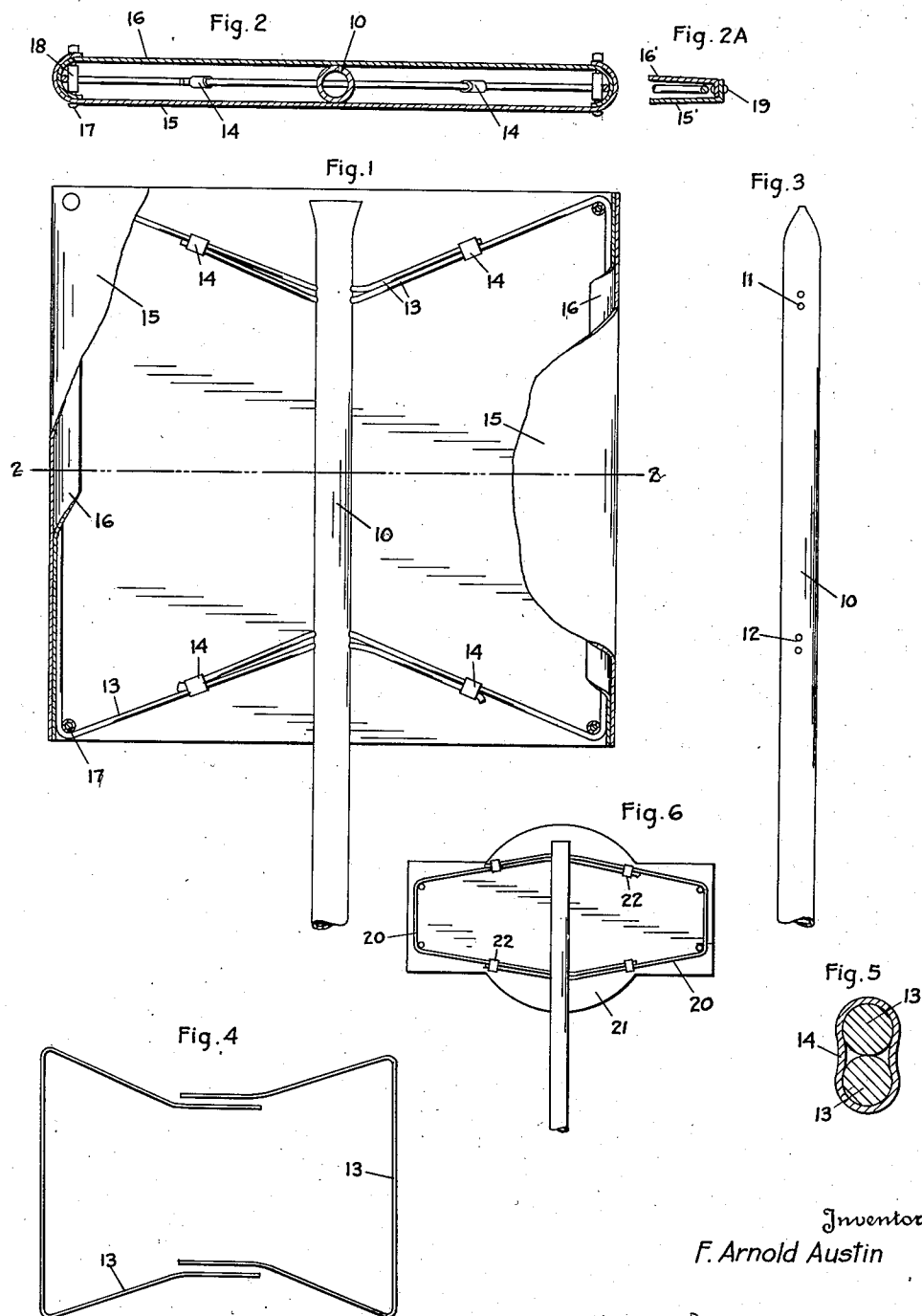


Dec. 15, 1936.

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SIGN AND SIGN FRAME
Filed Feb. 11, 1936

2,064,240



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2,064,240

SIGN AND SIGN FRAME

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Application February 11, 1936, Serial No. 63,337

6 Claims. (Cl. 40—145)

My invention relates to road signs, its primary object being the provision of a sign of low cost of production and adapted to resist the stresses encountered by such signs.

5 Another object of the invention is a provision of a sign frame which may be taken to the place where it is to be installed and so arranged in disassembled relation that the parts may be readily assembled on the job and with no other
10 tools other than those usually carried for the purpose.

Another object of the invention is the provision of a sign of such construction that it is especially adapted to withstand the stresses due
15 to vibration, the parts being so related that little or no slippage can occur which might weaken the sign frame.

Another object of the invention is the provision of a panel structure of specialized form, the panel being so arranged as to slip over the
20 frame and to be secured thereto.

Having in view these objects and others which will be pointed out in the following description, I will now refer to the drawing, in which—

25 Figure 1 is an elevational view of the assembled sign, portions of the panels being torn away to disclose the frame structure which will normally be hidden from view.

Figure 2 is a cross sectional view of the line 2—2 of Figure 1.

30 Figure 2A is a view similar to Figure 2 but showing an end fragment of a portion of the frame and panels in modified form.

Figure 3 is a view in side elevation of the sign post.

35 Figure 4 shows in elevation the two frame members which are attached to the sign post to constitute the sign frame.

Figure 5 is a cross sectional view showing the means for connecting the overlapping ends of the
40 rods.

Figure 6 is an elevational view drawn to a reduced scale and showing a modified form of my sign frame and panel, only the panel on the far side being shown to disclose the frame structure which would otherwise be concealed.

45 The sign post 10 is preferably made from tubing but it is obvious from the following description that many other suitable materials may be substituted for the tubing. Such tubing is usually sheared into post lengths and the shearing process naturally flattens out the ends as shown at the top in Figures 1 and 3. The post is drilled transversely thereof to provide an upper
50 pair of apertures 11 and a lower pair of aper-

tures 12, these apertures passing diametrically through the post with the four apertures in vertical alignment.

The frame for the sign consists of two parts 13 shown in Figure 4. In the form shown in
5 this figure the rods are bent with portions converging from the base and then again bent so that their end portions are parallel. The rods are cut and bent into the form shown in Figure 4, all of the frame members 13 being identical. The distance between the parallel end portions
10 of the frame members 13 is important in its relation to the spacing of the apertures 11 and 12 of the sign post. The distance between the parallel end portions of the frame members 13
15 should be less than the distance between the outer apertures 11 and 12 but greater than the distance between the inner apertures 11 and 12.

In the application of the frame members 13 to the post 10, one of the frame members 13 is
20 applied to the post with the ends of the parallel portions against the outer of the apertures 11 and 12. The parallel end portions are thrust through the post and the other of the transverse members 13 is then similarly applied to
25 the inner pair of the apertures 11 and 12 and forced through until the converging portions of the frame members 13 contact with the sign post. The projecting portions of the frame members 13 are then bent into contact with
30 the converging portions as shown in Figure 1. The apertures 11 and 12 must necessarily be slightly greater in diameter than the diameter of the rods that make up the frame members 13. Because of the dimensional relation, the
35 members 13 must be slightly sprung to put them into alignment with the proper apertures of the post. This increases the friction between the frame members 13 and the post to resist their
40 tendency to slip relative to each other under wind and other stresses. The bending of the projecting portions of the frame members 13 provides additional anchorage between the frame members and the post and reinforces the members 13 at the points of the greatest torsional
45 stresses.

It is desirable that the overlapping portions of the frame members 13 be permanently secured together and this may be accomplished by means of the clip shown in Figure 5. This
50 clip is made from tubing which is cut into the proper lengths and which is flattened into elliptical form to embrace both of the overlapping portions of the frame members 13 as shown in
55 Figures 1 and 5. While many suitable forms

of securing means may be employed, the clips 14 have the advantage of low cost of production since they may be cut from scraps of tubing which would otherwise be wasted. The clip 14 is readily slidable on an arm of the frame members 13 and it is readily slidable over the overlapping portion of the other frame member. In practice it is desirable to bend these overlapping portions into proximity with the opposite frame members 13 so that their ends come into loose contact with the opposite frame members. The rod material from which the frame members are made possesses a degree of resilience so that the two overlapping portions must be sprung together in order to slip the clip 14 into place. This provides a resistance to wind and other stresses. After the assembly in the manner above described the clip 14 may be distorted in any suitable manner to provide an exceedingly firm engagement of the clip with the frame members. The friction will then hold the parts in fixed relation to each other. In order to prevent any slippage of the lower clips downwardly, the ends of the overlapping portions of the frame members may be battered or bent into the shape shown in Figure 1.

The sign frame as above described will function with panels of any of a number of types of panels but my preferred panel construction is the one shown in Figure 2. This consists of an outer panel 15 and an inner panel 16, the two being connected at their outer edges in overlapping relation and thus secured together. The distance between the panels 15 and 16 is substantially equal to the external diameter of the post 10 so that the panel assembly may be slipped over the sign frame to entirely conceal the sign frame if desired. This panel assembly may then be secured to the sign frame by passing bolts 17 through the panel assembly at the corners of the sign frame. In order to avoid accidental crushing of the panel assembly, spacing collars 18 may be employed and with the bolts 17 passing therethrough. A slightly different form of sign panel is suggested in Figure 2A. In this case the outer panel 15' and the inner panel 16' are provided with overlapping ends which may be secured together by means of rivets 19 or in any other suitable manner. These panels 15' and 16' diverge toward the median line so that the distance between them at the median line will be substantially equal to the external diameter of the post.

The sign frame and sign may both be modified in a number of different ways. Just by way of example, the frame shown in Figure 6 embodies one of the many variations. The frame members 20 are formed with obtuse angles instead of acute angles so that the shape of the assembled sign is radically different from the shape of the sign frame shown in Figure 1. Such variations in the shape of the frame facilitate the use of the frame with other forms of panels as shown at 21 in Figure 6.

The form of the frame shown in Figure 1 is of a clover-leaf design but it is obvious from the showing in Figure 6 that the design is adapted for almost an infinite number of variations. A common form of road sign is circular but it will be apparent that the frame members may be curved into more or less of a circular form for supporting circular panels. In all cases the frame members must be passed through the sign post into overlapping relation. Numerous variations in the frame and panels are therefore possible, employing the use of frame

members passing through the sign post and with overlapping portions which may be secured together. Fasteners similar to the bolts 17, with or without collars, may be employed whenever necessary to secure the panel members to each other and to the frame.

The sign construction as above described is exceedingly durable since it is designed to resist all the stresses usually encountered in outdoor signs. At the same time, its construction cost is very low due to the fact that standardized materials are employed throughout, some of which materials would otherwise be wasted. The great advantage, however, resides in the fact that the sign may be left disassembled until it is to be assembled on the job. The posts 10 may be bundled and shipped at low freight rates. The same is true of the members 13 which may also be bundled to occupy very little space whether in freight car or truck. The panel assembly will likewise be compact. All that is necessary is to transport the requisite parts to the spot where the sign is to be erected whereupon the workmen may assemble the sign without the use of special tools and without the necessity of any special skill on the part of the workmen.

Having thus described my invention in such full, clear, and exact terms that its construction and operation will be readily understood by others skilled in the art to which it pertains, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A sign frame and a post therefor, said frame including a pair of substantially vertical members on opposite sides of said post and spaced therefrom, each of said vertical members having an arm projecting through said post, said arms being in close contiguity and overlapping at their inner portions, and means for securing together the inner portions of said arms.

2. A sign frame and a post therefor, said frame including a pair of substantially vertical members on opposite sides of said post and spaced therefrom, each of said vertical members having an arm inclined away from the horizontal toward and through said post and then inclined into overlapping relation with the arm of the opposite of said vertical members.

3. A sign frame including a post having two pairs of transverse apertures, the apertures of each pair of apertures being in close proximity, a pair of substantially U-shaped frame members having arms passing through the apertures of said post in overlapping relation, and means for securing together the overlapping portions of said arms.

4. A sign post and sign frame, said post having upper and lower pairs of transverse apertures, a pair of frame members on opposite sides of said post, a pair of resilient arms on each of said frame members and passing through the apertures of said post, the apertures of each pair of apertures of said post being contiguous but slightly spaced from each other whereby said arms will be slightly spaced from each other in the portions adjacent to said post, and means at the extremity of each of said arms for securing the overlapping portions of said arms together against the tendency of said arms to spread due to their resilience.

5. A sign frame and a post therefor, said frame having side, top and bottom members with said top and bottom members passing through said post, a pair of sign panels embracing said frame and said post, and means

at the corners of said frame and said panels for securing said panels together and to said frame, said securing means being remote from said post.

- 5 6. A sign including a post and a frame secured symmetrically thereto, said frame having a pair of side members, top and bottom members in

angular relation with said side members, a pair of panels on opposite sides of said frame, and bolts passing through both of said panels and through said frame at the corners formed by said top and bottom and side members for securing said panels together and to said frame. 5

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