Sept. 18, 1928. 1,684,470

G. P. BUTLER

SIGN

Filed Oct. 1, 1926

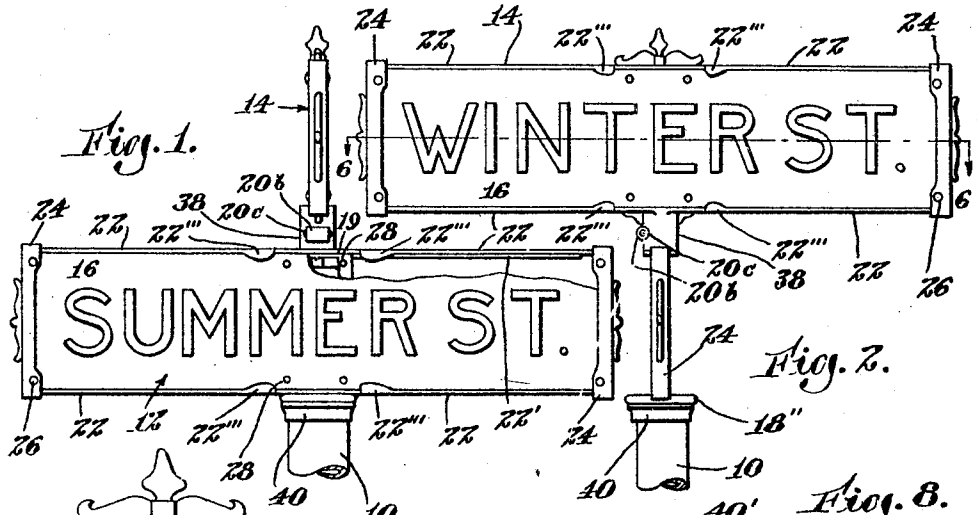


Fig. 1.

Fig. 2.

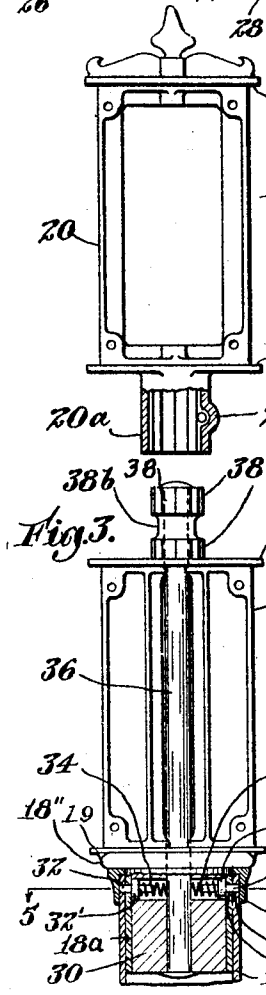


Fig. 4.

Fig. 3.

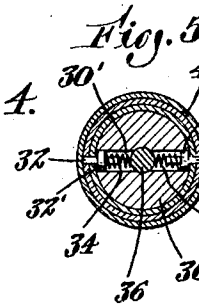


Fig. 5.

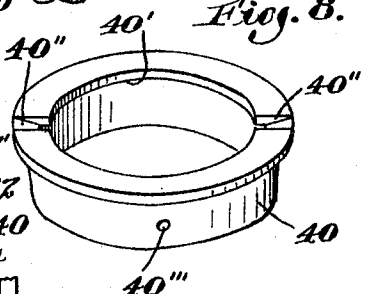


Fig. 8.

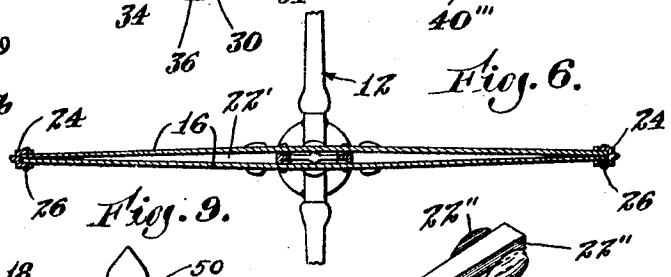


Fig. 6.

Fig. 9.

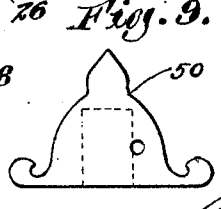


Fig. 7.

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UNITED STATES PATENT OFFICE.

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SIGN.

Application filed October 1, 1926. Serial No. 139,002.

This invention relates to improvements in signs. More especially it relates to improved construction, particularly adapted for out-of-door signs, whereby their ability to withstand the stress of weather and other attacks is increased. The invention is applicable to signs having one or more indicating boards and provides for the selective setting of the boards as to direction, with respect to the supporting post or to one another, and for locking them securely in such position. It also includes improved means for locking the sign proper upon its supporting post to the end that the same may be securely held against inadvertent displacement.

Street signs ordinarily have to be in the form of boards, usually at the top of a post, and it is desirable that they have two visible faces and that the margins be finished. The common practice when making signs for indicating diverse directions, i. e. double signs, is first to send someone to the location and determine the desired angular relation between the boards and then to construct the sign as a complete unit with the boards fixed in the position they are to occupy relative to each other on the post. This involves making special mountings designed to accommodate the particular angle desired, and consequently such mountings are not interchangeable. Stock parts cannot very well be made up and each sign must be treated as a sort of special task. This greatly delays the installation of a sign after its need is felt, and adds materially to its cost.

It is an object of the present invention to provide a standard construction for mass production, such that signs which differ individually, as for a large number of city streets, can be made and assembled cheaply in finished self-protecting form. It is an important feature that standard parts may be quickly and easily assembled to produce signs having a single indicating board or signs having a plurality of indicating boards, and that the respective boards may be positioned, at the time of installation, in any of diverse angular relations with respect to one another, and may be securely locked in the particular selected position. A further feature is that the signs may be manufactured without regard to and even without knowledge of the proposed location or the angles required at the intersection of streets where they are installed. Another object is to provide means within the device and completely concealed from view and protected, for retaining and locking the sign proper upon its post. It is moreover an important object to employ a principle of construction such that signs which are in a very superior sense durable may be produced at moderate expense.

These ends are attained by providing two sign plates set back to back instead of the usual single board or plate, each having the characters indicating the street appearing on one of its faces, one form of constructing these plates and their lettering being disclosed in my copending application No. 625,986 filed March 19, 1923. According to the present invention these plates are mounted on opposite sides of a thin central support which may be at the top of a post, or, in the case of double signs, may be mounted above the lower sign board. Marginal clamping strips protect their top and bottom edges and seal the space between them; and end caps, which may be riveted in place, secure the whole. The sign plates by interengagement of the cover and clamping strips with the thin central support and end caps are held against removal vertically or horiontally. Thus a composite sign plate having the appearance of being a single board or plate can be made, with metallic characters mounted on the face and fastened on the back of each board, with fastenings fully concealed.

The central support of the lower sign board is made to telescope with the top of the post and has an internal self acting bolt which locks the two together and is concealed from view. But the bolt quickly and easily may be actuated by a person familiar with the sign structure, to unlock the sign proper from its supporting post, for removal.

The central support of the upper sign board has a depending hub socket opening downward and formed internally with many pairs of parallel sides. When a sign having two indicating boards is desired it is only necessary to position an upper sign board above a lower one, the depending hub socket on the upper one fitting a similarly faced hub provided on the top of the lower board, with the signs arranged in any desired angular relation to one another. While in place it cannot be rotated, by accident or design; and a stout horizontal pin which may have a riveted head, passing tangentially through the wall of the socket and through a groove in the stud, prevents the socket being lifted from the stud. The setting of the sign is

thus correct and permanent; yet such signs can be made, in mass production, without knowledge of the angle at which they are to be set; and each may be set at any angle.

The invention may be applied in various ways, one of which is illustrated in the accompanying drawings.

It is intended that the patent shall cover by suitable expression in the appended claims whatever features of patentable novelty exist in the invention disclosed.

In the accompanying drawing:

Fig. 1 is an elevation of a sign embodying the invention,

Fig. 2 is a similar view at right angles to Fig. 1.

Fig. 3 is an elevation of the lower central supporting member, with portion in medial section;

Fig. 4 is an elevation of the upper central supporting member, with a portion in section;

Fig. 5 is a plan in section on line 5—5 of Fig. 3;

Fig. 6 is a plan in section on line 6—6 of Fig. 2.

Fig. 7 is a perspective of a marginal strip;

Fig. 8 is a perspective of the protecting collar; and

Fig. 9 is an elevation of an auxiliary cap.

Referring to the drawings the numeral 10 designates a sign supporting post, 12 a lower sign board and 14 an upper sign board. Each board embodies two sign plates 16 which may be constructed of any desired material with characters on their exposed faces indicating the streets. These plates are mounted back to back on opposite sides of thin central supporting members 18 and 20 which are in turn secured together and locked on the post. Each member has a rectangular frame and at top and bottom is provided with horizontal flanges 19 which overlie the top and bottom edges of the plates 16. The latter are bowed around their central supports, with their ends together so that wedge shaped spaces are formed between the two sign plates. The openings of these spaces are closed by four tapering strips 22. Each strip has a rib 22′ centrally of its inner face which fits between the sign plates and extends slightly beyond the inner end of the strip, to engage under, or on, as the case may be, the flange 19 on the central support. Flanges 22″ are formed on each side of the strips 22, near their inner ends, and engage the outer faces of the two plates 16, to hold them against the central support and against the rib 22′ extending outward between them. The end of the strip 22, which is beyond the ribs 22′, is engaged by a cap 24 which slips over them and around the ends of the sign plates. In this manner the plates 16 are protected all around their edges. Rivets 26 or other secure fastenings means may be employed to hold the end-caps 24 permanently in position. Additional rivets 28 may be used at the center if desired, but are not necessary, because the end-caps hold the sign plate and their cover strips together and the flanges 22″ on the latter prevent the plates from separating from the central support.

For the purpose of mounting the sign upon post 10 the lower central support 18 has a depending hub in the form of a thimble 18ª within which is a tightly fitting wood or metal plug 30. A hole 30′, extending horizontally through the plug, constitutes a housing and guide for spring-pressed self-acting bolts 32, which are urged outward through oppositely arranged holes 18ᵇ in the thimble and into oppositely arranged holes 10ª in the post when the two sets of holes are brought into register. As illustrated, each bolt 32 in formed with a shoulder 32′ against which a spring 34 presses and by which the outward movement of the bolt is limited. The inner ends of the springs abut against a rod 36 which extends axially through the plug 30, through the central support 18, and through an upper hub 38 at the top of the support 18. This rod while serving as a stop for the bolt springs 34 primarily gives strength and rigidity to the sign as a whole being headed over at top and bottom on the hub 38 and plug 30 respectively.

It is important that the locking means be concealed from view and protected. To this end there is provided a collar 40 which fits around the post 10 and has an inwardly extending flange 40′, which rests upon the top of the post just under the circular base plate 18″ of the central support 18. This collar is placed on the top of the post before the thimble 18ª is inserted so that as the latter descends, the spring urged bolts 32 will overlie the flange 40′ of the thimble. To enable these bolts to be pressed inward, so that the thimble may enter the hollow of the post, the collar 40 is provided with tapered grooves 40″ on its upper edge. A knife blade can be pushed along these grooves against the ends of the bolts and thus hold them retracted until they pass within the post. When the bolts eventually enter the holes 10ª in the post, the latter are covered by the collar and the locking means thus hidden from view. To remove the sign from the post the collar 40 can be turned until a hole 40‴ therein is opposite one of the holes 10ª whereupon a pin or the like can be inserted to disengage one bolt from the post. The thimble is tipped upward a little to bring that bolt out of alignment with the hole 10ª and thus hold it retracted while the collar 40 is then turned half way round and the opposite bolt likewise disengaged. With both bolts thus free from the holes 10ª the sign may be removed from post.

The feature of the invention whereby single

signs may be readily converted into double signs, and whereby selective setting of an upper sign board with respect to the one beneath it is permitted is important and tends toward greatly reducing production cost of signs. The vertically rising hub 38 on the top of the lower central support 18 is formed with many pairs of parallel faces 38^a oppositely arranged; and has a groove 38^b of substantial depth extending completely around it. The central support 20 of the upper sign board has a depending socket hub 20^a, formed interiorly with an equal number of oppositely parallel faces so that it can be slipped upon the non-round hub 38, with any angular setting with respect thereto that may be determined when the sign is erected on its location. The engagement of the respective flat surfaces prevents any rotative displacement and endwise removal is prevented by a pin. 20^c which passes through a boss 20^b on the hub 20^a and engages in the groove 38^a. When headed at both ends, this pin securely locks the upper sign to the lower sign.

Any strain imposed upon the top sign board is transmitted through its connection with the hub 38 to the rod 36. Likewise any strain on the lower board is transmitted direct to this rod. As a result the sign as a whole is extremely strong and durable.

It is evident that the various parts may be manufactured in quantity. Only the sign plates 16 and the marginal strips 22 need be made in different sizes to accommodate signs of different lengths. If only one sign board is to be erected, a special cap 50 can be attached to the hub 38 by a rivet engaging the grove 38^b, to enhance the general appearance.

I claim as my invention:

1. A sign comprising, in combination, a hollow post; two sign boards arranged one above the other at the top of the post, the lower board having on its top a vertically rising non-round head and on its bottom a depending cylindrical sleeve adapted to telescope the top of the post, and the upper board having on its bottom a depending socket, internally formed with many equal sides to receive the non-round head of the lower board; means securing said head and socket together; means for locking the lower board to the post and a stiffening and strengthening rod with a plug at its lower end housing said locking means; the said rod extending thence axially through the lower sign board and having connection with the said non-round head, whereby stresses upon said head are transmitted to the post through the said rod, plug and locking means.

2. A sign comprising, in combination, a hollow post; a lower thin, central sign-board-supporting member having on its top a vertically rising non-round head with circumferential groove and on its bottom a depending cylindrical sleeve adapted to fit within the hollow of the post; a sign-board-supporting member having on its bottom a depending socket internally formed with many sides to receive the non-round head; means securing said head and socket together; a stiffening and strengthening rod extending axially through the lower supporting member and having connection with the said non-round head; a plug on the lower end of said rod within the said depending cylindrical sleeve; locking bolts on opposite sides of said rod; holes in said cylindrical sleeve and in the post aligned with said bolts; and springs abutting against said rod urging the bolts through said holes; said rod, plug and bolts serving to transmit stresses from above to the post.

3. A sign comprising, in combination, a thin, upright retaining member having horizontal flanges at its top and bottom; sign plates, arranged back to back, enclosing said member, excepting its flanges, and set between its side flanges; retaining strips, engaging under the end flanges of said member and extending endwise of the plates, embracing and covering their top and bottom edges; and caps, securing together the ends of the sign plates and retaining strips.

4. A sign comprising, in combination, a thin upright retaining member having horizontal flanges at its top and bottom; sign plates, arranged back to back, enclosing said member, excepting its flanges, and set between its said flanges; retaining strips, engaging under the end flanges of said member and extending endwise of the plates, covering their edges, having a rib depending between the plates and having at their inner ends depending lugs for engaging the outer faces of the sign plates thus preventing their spreading; and means securing together the ends of the plates and strips.

Signed at Boston, Massachusetts, this thirtieth day of September, 1926.

GEORGE P. BUTLER.