Sept. 29, 1931. J. B. WHITLOW 1,825,564

REVOLVING SIGN

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Fig. 1.

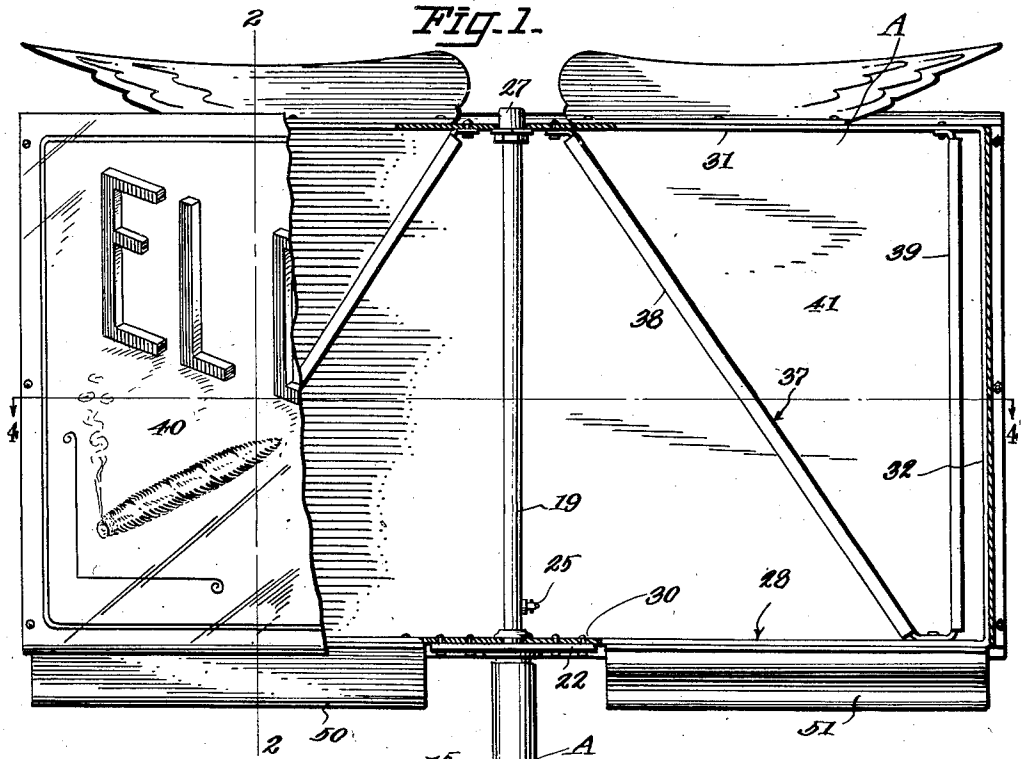
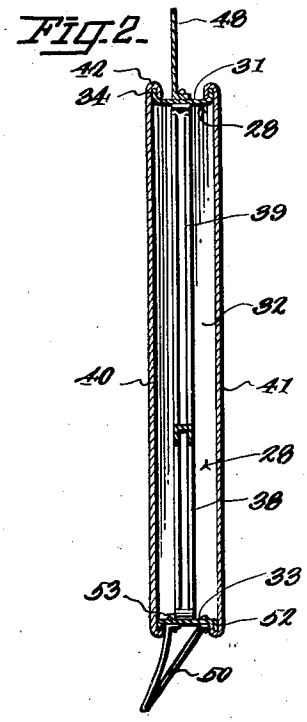


Fig. 2.



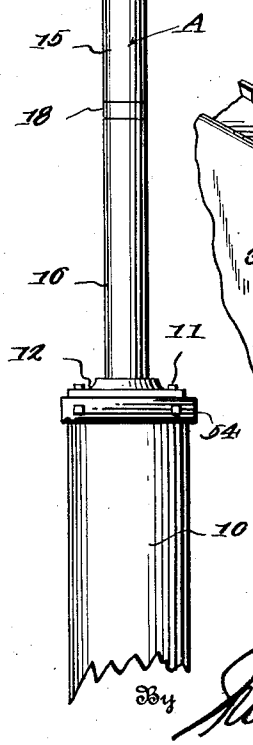
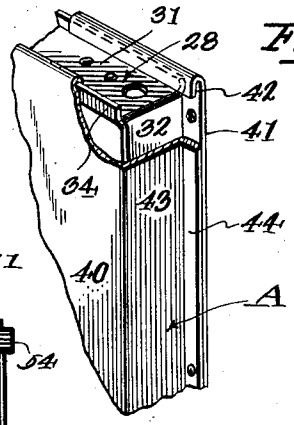


Fig. 3.



Inventor

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Fig. 4.

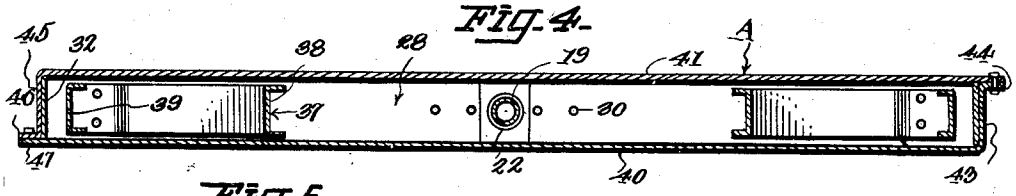


Fig. 5.

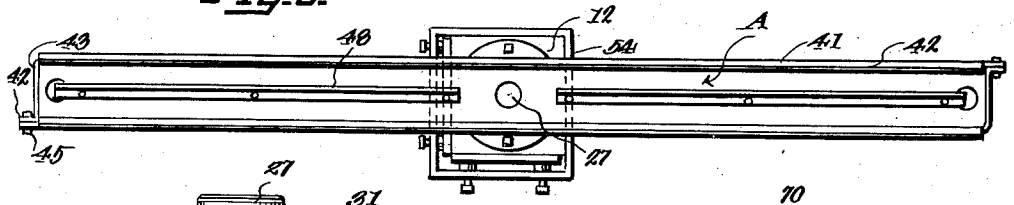


Fig. 6.

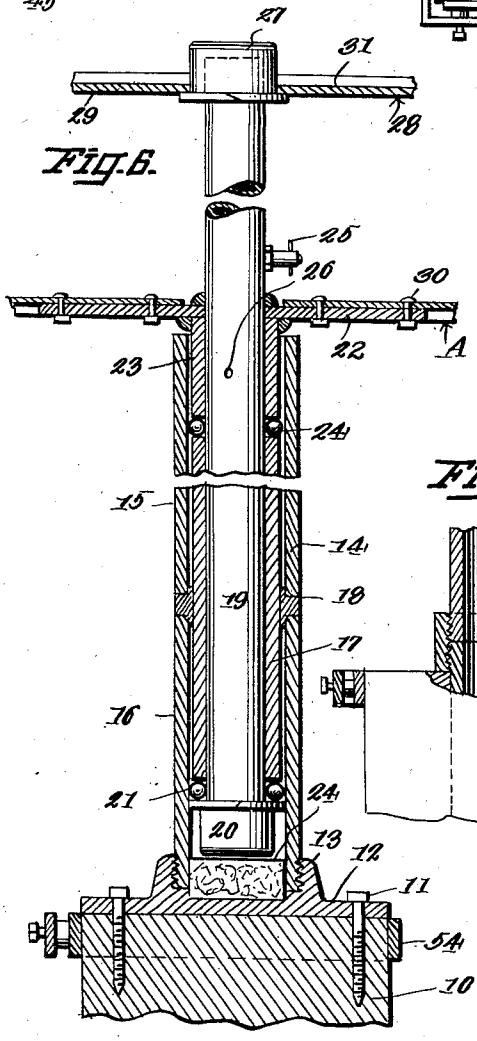


Fig. 7.

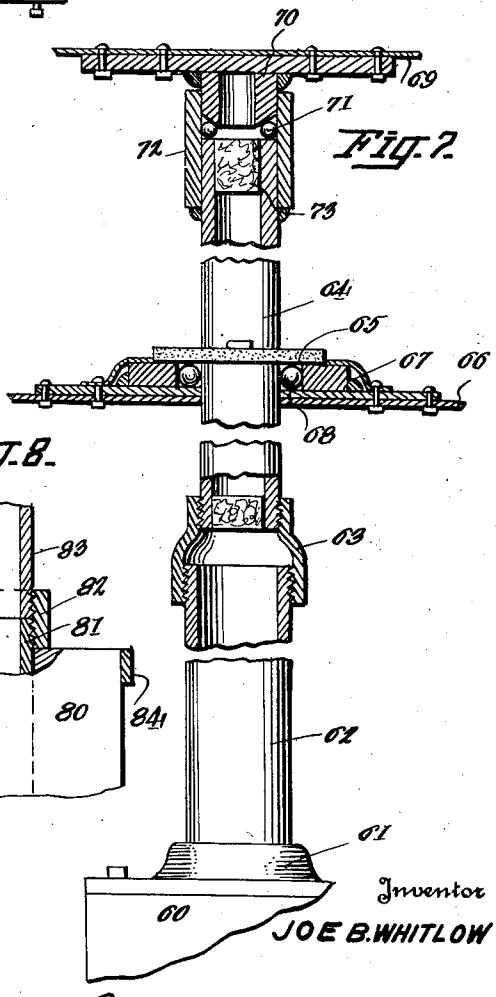
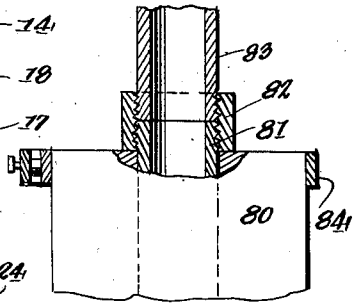


Fig. 8.



Inventor

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Attorney

Patented Sept. 29, 1931

1,825,564

UNITED STATES PATENT OFFICE

JOE B. WHITLOW, OF JOHNSON CITY, TENNESSEE

REVOLVING SIGN

Application filed February 27, 1931. Serial No. 518,809.

This invention appertains to signs of the type particularly adapted to be used for highway advertising and one of the primary objects of my invention is to provide a sign of the revolving type, having means whereby the same will be automatically rotated by the action of the wind on the same.

Another important object of my invention is the provision of novel means for mounting the sign per se upon a suitable support, whereby the sign will be free to revolve with a minimum amount of friction, means being provided whereby the lubrication of the rotating parts is insured.

A further salient object of my invention is the provision of novel means for forming the sign itself, whereby the sign board can be readily removed from the revolving head structure, without dismantling the entire sign, so that the sign board can be readily repainted or otherwise treated to display the new and desired advertising matter.

A still further object of my invention is to provide an improved wind operated revolving sign of the above character, which will be durable and efficient in use, one that will be simple and easy to manufacture, and one which can be placed upon the market at a reasonable cost.

With these and other objects in view, the invention consists in the novel construction, arrangement and formation of parts, as will be hereinafter more specifically described, claimed, and illustrated in the accompanying drawings, in which drawings:—

Figure 1 is a side elevation of my improved wind operated revolving sign showing parts thereof broken away and in section to illustrate the construction thereof.

Figure 2 is a transverse section through the revolving head taken on the line 2—2 of Figure 1 of the drawings.

Figure 3 is a detail fragmentary perspective view of the revolving sign head illustrating the novel means employed for connecting the sign board to the head.

Figure 4 is a horizontal section taken on the line 4—4 of Figure 1 looking in the direction of the arrows illustrating the construction of the sign head.

Figure 5 is a top plan view of the improved wind operated revolving sign.

Figure 6 is an enlarged fragmentary vertical section illustrating the means for rotatably supporting the revolving sign head.

Figure 7 is a view similar to Figure 6 illustrating a modified form of means for mounting the revolving sign head.

Figure 8 is an enlarged detail fragmentary section illustrating a means for mounting the supporting standard on the supporting post.

Referring to the drawings in detail, wherein similar reference characters designate corresponding parts throughout the several views, the letter A generally indicates my improved revolving sign, which comprises an anchor post 10, which can be made of wood or similar material suitably imbedded in the ground. The upper end of the post 10 has connected therewith by lags or like screws 11, a cap plate 12, provided with an axially disposed internally threaded boss 13, for receiving the supporting bearing sleeve 14. This sleeve 14 is preferably formed from inner and outer vertically aligned sections 15 and 16, which are welded together and to an inner supporting sleeve 17, as at 18. The bearing sleeve 17 rotatably receives the supporting spindle 19, which has detachably secured to its lower end a cap 20, and rollers or ball bearings 21 are interposed between the cap 20 and the lower end of the bearing sleeve 17. Welded to the rotatable spindle 19 is a supporting plate 22 and this plate 22 has in turn welded thereto a depending short sleeve 23. Suitable rollers or ball bearings 24 are interposed between the short sleeve 23 and the upper end of the bearing sleeve 17.

I preferably seal the lower end of the outer sleeve 16 by the use of a plug or cork 24, so as to prevent the leakage of lubricant from the lower end of the said sleeve 14. The lubricant can be introduced directly into the revolving spindle 19 by the use of any preferred type of fitting 25 for detachably receiving a grease gun. The spindle 19 can be provided with suitable outlet grease holes 26, whereby the grease can find its way from out of the spindle to the bearings.

The upper end of the spindle 19 receives a closure cap 27, and the head 28 of the sign is supported by the spindle 19, the cap 27, and the plate 22.

The revolving sign head 28 comprises an open rectangular frame 29, formed of strap iron or the like, and the ends of the metal from which the frame is made is bolted or secured as at 30 to the head plate 22. This defines a top wall 31, end walls 32, and a bottom wall 33. The top wall 31 and the bottom wall 33 can be provided with outwardly bent flanges 34 on their side edges as clearly shown in Figure 2 of the drawings. This frame can be internally braced, by the use of brace bars 37, which as shown include inner diagonal brace bars 38 extending from the top of the revolving head adjacent to the cap 27 to the lower outer corners of the revolving head. The bracing members also include vertical upright struts 39 which extend from the bottom wall 33 to the top wall 31.

The open rectangular frame 28 supports the opposite sign boards 40 and 41, which are in the nature of sheet metal plates. These sign boards have their upper and lower edges provided with inturned substantially U-shaped guide flanges 42 for slidably receiving the flanges 34 formed on the top and bottom walls 31 and 33 of the open frame 28. One end of the sign board 40 is provided with an inturned marginal flange or end wall 43, having formed on its edge the lateral attaching flange 44. The sign board 41 has formed on the end thereof remote from the end of the sign board 40 having the flange 43 thereon, an inturned flange or end wall 45 which in turn has formed on its free edge the laterally disposed attaching flange 46. These sign boards 40 and 41 are slid on the open frame in opposite directions until their flanges 43 and 45 abut against the end walls 32 of the frame, at which time the sign boards are connected together by means of removable bolts 47 which extend through lateral attaching flanges 44 and 46 and the face of the adjacent sign board.

The outer show faces of the sign boards can be provided with a desired type of display signs as suggested in Figure 1 of the drawings, and likewise the entire sign can be suitably ornamented so as to present a pleasing and attractive appearance. As shown in Figures 1 and 5 of the drawings the top of the sign head can be provided with ornamental iron 48. Likewise the sign can be provided with a suitable small display sign or card giving warning to malicious persons that anyone mutilating the sign will be prosecuted.

As stated, the sign is wind operated and consequently the lower face of the sign head on opposite sides of the spindle is provided with depending oppositely directed wind fins or blades 50 and 51. I preferably make these blades 50 and 51 of a substantially V-shape as shown in Figure 2 of the drawings and each of the blades are formed from a single sheet of metal and are provided with lateral attaching feet 52 which are bolted or otherwise secured, as at 53 to the bottom wall 33 of the open frame 28. As stated, the fins are arranged in opposite directions relative to one another and are slightly arcuated in cross section and the action of the wind against the same will effectively rotate the sign head.

In order to prevent the upper end of the wooden supporting post 10 from splitting or cracking, a reinforcing frame 54 can be provided for the post as clearly shown in the drawings.

In Figure 7 I have illustrated a slightly modified form for supporting the sign head and this modified form embodies an anchor post 60 having secured to its upper face a cap plate 61 to which is connected a hollow supporting standard 62, which may be considered as a section of pipe or the like. Connected to the upper end of the standard 62 by reducing couplings 63 is a hollow length of tubing or the like 64 having welded or otherwise secured thereto an abutment plate 65. The lower wall 66 of the sign head carries any preferred type of ball race 67 carrying the ball bearings 68 for engaging the tubing 64 and the plate 65. The top wall 69 of the sign head carries a depending bearing head 70, which rests upon suitable ball bearings 71 bearing against the upper end of the tube 64. The extreme upper end of the tube 64 carries a sleeve 72 which can be welded on the same and this sleeve receives the bearing head 70 and the bearings 71.

The opposite ends of the tube 64 are preferably plugged by means of corks or the like 73 and means can be provided for permitting the effective lubrication of the bearings.

In Figure 8 I have shown a slightly modified form of means for connecting the standard to a supporting anchor post 80, and in this form the supporting post 80 has extending axially through the same a section of pipe 81, to which is connected by means of a sleeve coupling 82 the supporting standard 83. The upper end of the post 80 can be reinforced against splitting by means of a collar 84.

From the foregoing description, it can be seen that I have provided an exceptionally simple and durable wind operated revolving sign, which will be attractive to travelers on a highway.

Changes in details may be made without departing from the spirit or the scope of this invention, but:—

What I claim as new is:

1. A wind operated revolving sign comprising a supporting standard, a rotatable spindle received within the standard, a sign head secured to the spindle and projecting from the opposite sides thereof, and oppo-

sitely directed wind blades secured to the edge of the rotatable sign head, said blades being of a substantially V-shape and arcuated laterally toward one side of the head.

2. A wind operated sign comprising a supporting standard, a rotatable head carried by the standard including an open rectangular frame having a top wall, a bottom wall, and end walls, marginal flanges formed on the longitudinal edges of the top and bottom walls, and side sign plates having guide flanges on their longitudinal marginal edges receiving the flanges of the top and bottom walls, and means for locking the sign plates together against accidental displacement from the frame.

3. In a display sign, an open rectangular frame including top and bottom walls, and end walls, flanges formed on the longitudinal edges of the top and bottom walls, sign plates having guide flanges formed on their longitudinal edges slidably receiving the flanges of the top and bottom walls, the opposite end of each sign plate being provided with an inturned abutment flange having a lateral attaching flange on its free edge, means detachably connecting the attaching flange to the adjacent end of the opposite sign plate.

4. In a display sign, an open rectangular frame including top and bottom walls and end walls, flanges formed on the longitudinal edges of the top and bottom walls, sign plates having guide flanges formed on their longitudinal edges slidably receiving the flanges of the top and bottom walls, the opposite end of each sign plate being provided with an inturned abutment flange having a lateral attaching flange on its free edge, means detachably connecting the attaching flange to the adjacent end of the opposite sign plate, and interior bracing extending from the bottom to the top wall.

5. In a wind operated rotatable sign, a supporting standard including upper and lower tubular sections, a bearing sleeve arranged within the sections, means securing the meeting ends of the sections together and to the bearing sleeve, a rotatable spindle mounted within the bearing sleeve, a cap on the lower end of the spindle received within the standard, a bearing sleeve secured to the spindle, and bearings interposed between the two bearing sleeves and the first bearing sleeve and the cap.

6. In a wind operated rotatable sign, a supporting standard including upper and lower tubular sections, a bearing sleeve arranged within the sections, means securing the meeting ends of the sections together and to the bearing sleeve, a rotatable spindle mounted within the bearing sleeve, a cap on the lower end of the spindle received within the standard, a bearing sleeve secured to the spindle, bearings interposed between the two bearing sleeves and the first bearing sleeve and cap, a plug sealing the lower end of the standard, a grease gun fitting carried by and communicating with the hollow spindle, said hollow spindle being provided with grease outlets adjacent to the bearings.

7. In a revoluble wind operated sign, a supporting post, a head cap secured to the supporting post, a hollow supporting standard threaded into the head cap including inner and outer sections, a stationary bearing sleeve fitted within the hollow standard, means securing the adjacent ends of the sections of the standard together and to the stationary bearing sleeve, a spindle rotatably mounted within the bearing sleeve, a cap secured to the lower end of the spindle and received within the hollow standard, a rotatable bearing sleeve secured to the rotatable spindle, bearings arranged between the bearing sleeves and the stationary bearing sleeve and cap, and a sign head connected with the rotatable spindle.

8. In a wind operated revoluble sign, a supporting standard, a sign head, having a depending bearing sleeve, a bearing sleeve rigidly secured to the supporting standard and extending above the upper end thereof receiving the bearing sleeve carried by the sign head, ball bearings interposed between the upper end of the standard and the depending bearing sleeve, and a ball bearing race way carried by the sign head engaging the outer face of the standard.

In testimony whereof I affix my signature.

JOE B. WHITLOW.

DISCLAIMER

1,825,564.—*Joe B. Whitlow*, Johnson City, Tenn. REVOLVING SIGN. Patent dated September 29, 1931. Disclaimer filed January 24, 1933, by the patentee.

Hereby enters this disclaimer to claim 2 in said specification:

"2. A wind operated sign comprising a supporting standard, a rotatable head carried by the standard including an open rectangular frame having a top wall, a bottom wall, and end walls, marginal flanges formed on the longitudinal edges of the top and bottom walls, and side sign plates having guide flanges on their longitudinal marginal edges receiving the flanges of the top and bottom walls, and means for locking the sign plates together against accidental displacement from the frame."

[*Official Gazette February 14, 1933.*]