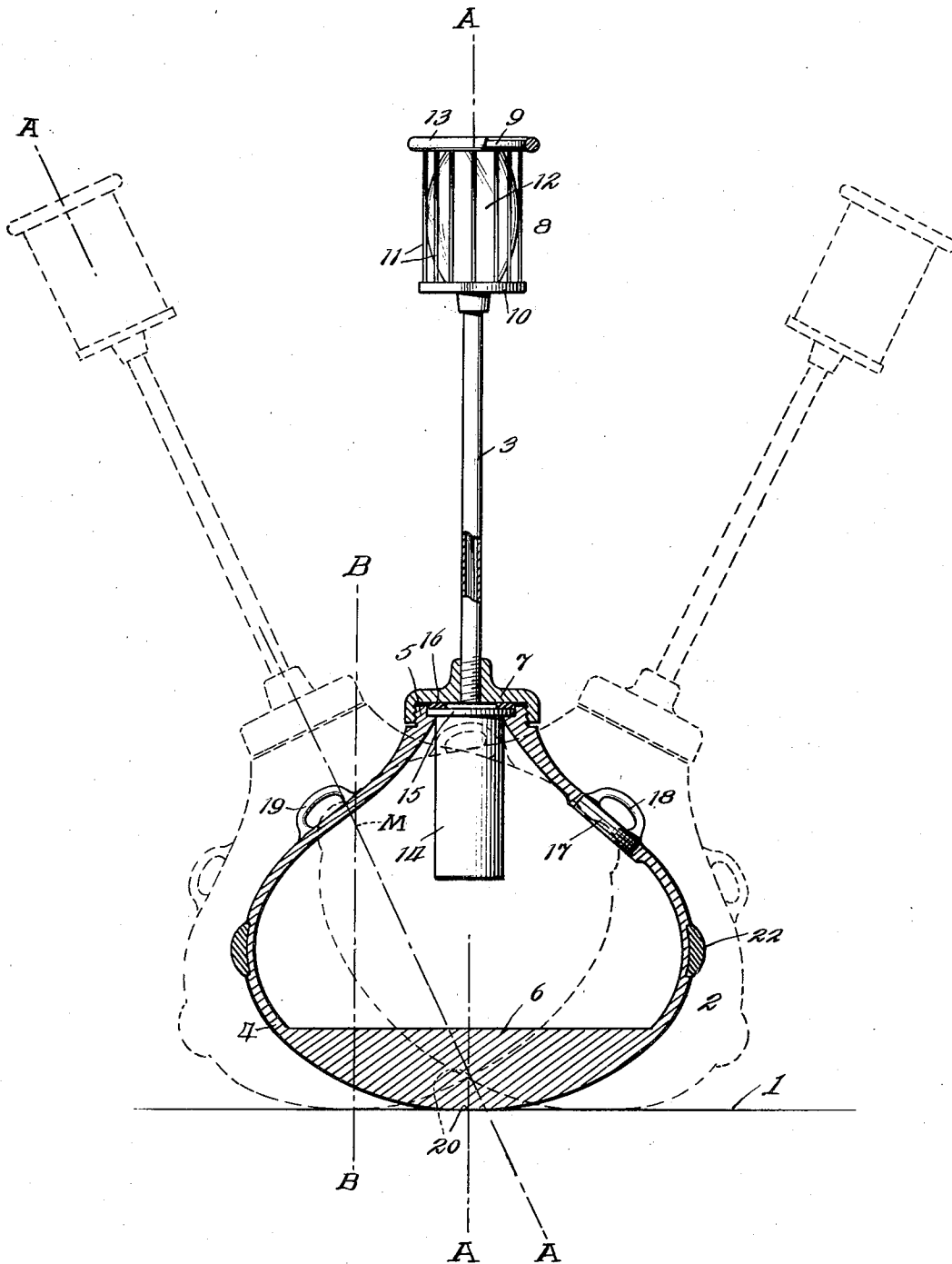


E. W. CONGDON, JR.
 SELF RIGHTING POST.
 APPLICATION FILED JULY 26, 1921.

1,425,945.

Patented Aug. 15, 1922.



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Application filed July 26, 1921. Serial No. 487,646.

To all whom it may concern:

Be it known that I, ERNEST W. CONGDON, Jr., citizen of the United States, residing at Glen Ridge, Essex County, State of New Jersey, have invented a new and useful Self-Righting Post, of which the following is a specification.

This invention relates to portable self-righting posts and is primarily intended to be employed as a means for controlling street-traffic.

Various types of posts have hitherto been used in directing street-traffic, usually being placed upon the streets to mark off parking spaces, and at street intersections to designate the course to be pursued by traffic in crossing, making turns and the like. Posts for such purposes ordinarily comprise an upright portion mounted on a weighted standard, so that they may be moved about as they are needed or set out of the way when not in use. When such posts are set upon the roadway used by vehicles, it frequently occurs that passing vehicles will run into and upset them, whereby the fallen posts become an obstruction instead of an aid to traffic, and their usefulness is destroyed until they are picked up. Very often these posts are placed at unattended corners, and when knocked down remain as an obstruction for considerable periods. Again, when posts carrying a lantern are upset, the lantern is usually broken.

It is the principal object of this invention to provide a post suitable for use in directing street-traffic which overcomes the disadvantages of existing posts by automatically rising to its normal position whenever it is upset.

A further object is to provide a combined self-righting post and lamp, which may be moved about as desired and which is arranged to prevent damage to the lamp when upset.

Still another object of the invention is to provide a post suitable for use on roadways, which readily yields when struck by a vehicle, thereby minimizing the likelihood of damage to both vehicle and post.

One embodiment of the invention is illustrated in the accompanying drawing showing in solid lines a vertical elevation partly in section of a self-righting lamp-post in normal position, and in broken lines the post in positions which it may assume when struck by vehicles.

Standing upon the roadway 1 is a self-righting post comprising in general a base 2 and an upright 3. The base preferably consists of a single relatively thin metal casting 4 the lower half of which has the shape of an ellipsoid of high eccentricity, while the upper half of the casting is continued inwardly and upwardly to the circular mouth or margin 5. Cast integrally with the lowermost portion of the shell 4 is a heavy weighted portion 6 of sufficient weight that the center of gravity of the post as a whole will lie within the space occupied by the weighted portion. The base is preferably of such a size that the greatest horizontal diameter or equator of the shell 4 will be approximately at the same height from the pavement as that of the hubs of vehicles, such as automobiles. An equatorial belt 22 of rope, rubber or the like may, if desired, be applied to lessen the shock of impact at this point, being held in place in a recess as shown.

The upright 3 is secured to its base in any convenient manner but it has been found most desirable to secure the upright detachably. In the embodiment shown, in which the invention is applied to a lamp post, the upright consists of a rigid tube 3 threaded at its lower end to a cap 7. The cap 7 has a downwardly turned flange threaded to cooperate with threads on the outer periphery of the mouth 5 of the standard. Thus, the tube 3 with its cap 7 may be removed from the base as a unit when access to the mouth 5 is desired. At the upper end of the tube 3 there is mounted a cage 8 comprising an upper ring 9 and a base-plate 10 connected by a number of rods 11. Within the cage there is provided a lamp of any well known type of which the glass globe 12 is shown. This globe may be colored red or otherwise to attract the attention of vehicle operators. The ring 9 is protected by a suitable covering 13 of elastic material, such as vulcanized rubber.

To house the supply of fuel or power for the lamp there is provided a cylindrical container 14 having a flanged upper margin 15, which normally rests on a shoulder provided as shown on the inner periphery of the mouth 5. The cylinder may contain gas or liquid fuel, or an electric battery, suitable connections to the lamp passing through the tubular stem 3. When a tight joint between the container 14 and cap 7 is desired a suitable gasket 16 may be placed

upon the upper face of the flanged portion 15.

In order to give access to the interior of the standard without the necessity of removing the cap and fuel container, as to switch the lamp on or off, there may be provided a number of hand-holes having covers 17, which are held in place by threads cooperating with the threaded margins of the hand-holes. To serve the double purpose of facilitating the removal of the cover 17 or to move the entire lamp, the handles 18 are secured to the outside of the cover. If desired, one or more additional handles 19 may be secured directly to the casting.

Referring to the stability of the post as a whole it will be convenient to consider a dotted line A—A running vertically upward from the normal point of support 20 through the center of tube 3 and defined as the axis of the post. From the foregoing description it is obvious that the center of gravity of the system will lie in or very close to this axis and below the upper surface of the weighted portion 6. If the base is struck by a vehicle or otherwise upset to the position shown at the left in dotted lines, it is obvious that the reaction with the roadway will be in the direction of the vertical dotted line B—B, the intersection of which line with the axis may be defined as the metacenter of the post indicated at M. In all positions occupied by the post between that when the first imperceptible deviation from normal position takes place and that when the post is in its extreme upset position with the covering 13 in contact with the roadway, the metacenter M will be farther removed from the point 20 along the axis of the post than is the center of gravity. It therefore follows that no matter how much the post is tilted over from its normal position there will always be a couple acting upwardly through the metacenter and downwardly through the center of gravity tending to right the post, which will therefore at all times return to its normal position after an initial shock has ceased to act on it.

When a vehicle strikes the base in the neighborhood of its equator, it merely spins the post upon its axis, when the impact is at a point removed from the equator the post yields, but returns to its normal position as soon as the exterior force is removed. It will be noted that in addition to returning to upright normal position, the post will be returned to substantially the same position on the pavement in which it was. It will not move about and get into a wrong place so as to improperly direct traffic. The shape of the base is such that as the post yields and its axis is inclined from the vertical, the distance between the line of upward thrust of the ground and the downward force act-

ing through the center of gravity increases, so that the farther the post is tilted the greater is the couple tending to right the post. Thus it is evident that seldom if ever will there be a strong enough impact to force the post to its extreme upset position, and the covering 13 will seldom come in contact with the ground. It is therefore possible to use various types of light which would be liable to fractures in a less stable post, and the number of replacements required is small.

While one embodiment of the invention has been described in detail, it is to be understood that this is merely for the sake of clearness and not to limit the scope of the invention as defined by the appended claims.

What I claim is:

1. In a self-righting traffic post, adapted for use on the surface of pavements, and the like, the combination with a base comprising a shell having a rotund weighted bottom extending upwardly and inwardly to form a mouth, a cover for the mouth, a container adapted to contain a supply of stored energy within the base, a lamp, a long slender upright projecting from the cover to support the lamp, and devices to operatively connect the lamp to the supply of energy.

2. In a self-righting traffic post, adapted for use on the surface of pavements, and the like, the combination with a base having a mouth, a container adapted to contain a supply of stored energy within the base and supported at said mouth, a cover for the mouth, a lamp, a long slender upright stem of light weight secured to the cover to support the lamp, and devices to operatively connect said lamp to said supply of stored energy.

3. In a lamp post, a base, an upright stem detachably secured to the base and a cage mounted on the stem, said cage comprising a base plate adapted to support a source of illumination, a ring through which such source may be inserted while said cage remains mounted on the stem, and a number of rods secured to said base to support said ring.

4. In a lamp post, a base, an upright stem detachably secured to the base and a cage mounted on the stem, said cage comprising a base plate adapted to support a source of illumination, a ring through which such source may be inserted, and a number of rods secured to said base to support said ring, said ring being provided with an elastic protective covering to soften the impact of said ring with the ground.

5. In a lamp post, a base comprising a metal shell having a rotund weighted bottom extending upwardly and inwardly to form a mouth, a container adapted to contain a supply of stored energy supported from the inner periphery of the mouth, a

cover for the mouth, a lamp, and a tubular stem detachably secured to the cover to afford operative connection between the container and the lamp.

- 5 6. A self-righting post having a base portion comprising a casting having an ellipsoidal outer lower surface, a mass of metal concentrated at the bottom of the casting, the casting having upwardly and inwardly
10 sloping walls to provide a constricted opening or mouth at the top, and being hollow above the said mass of concentrated metal, a cover for the mouth, a standard fastened to and extending upwardly from the cover, and
15 a lamp fastened to the top of the standard.

7. A self-righting post having a base por-

tion comprising a casting having an ellipsoidal outer lower surface, a mass of metal concentrated at the bottom of the casting, the casting having upwardly and inwardly
20 sloping walls to provide a constricted opening or mouth at the top, and being hollow above the said mass of concentrated metal, an energy storing container within the mouth and extending into the said hollow space, a
25 cover for the mouth for holding the container in place, a standard fastened to, and extending upwardly from, the cover, a lamp on the top of the standard, and inner connections for lighting the lamp from the energy
30 supply source.

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