Sept. 23, 1930. G. G. KING 1,776,682

LAMP POST

Filed Dec. 26, 1927

Fig. 2.

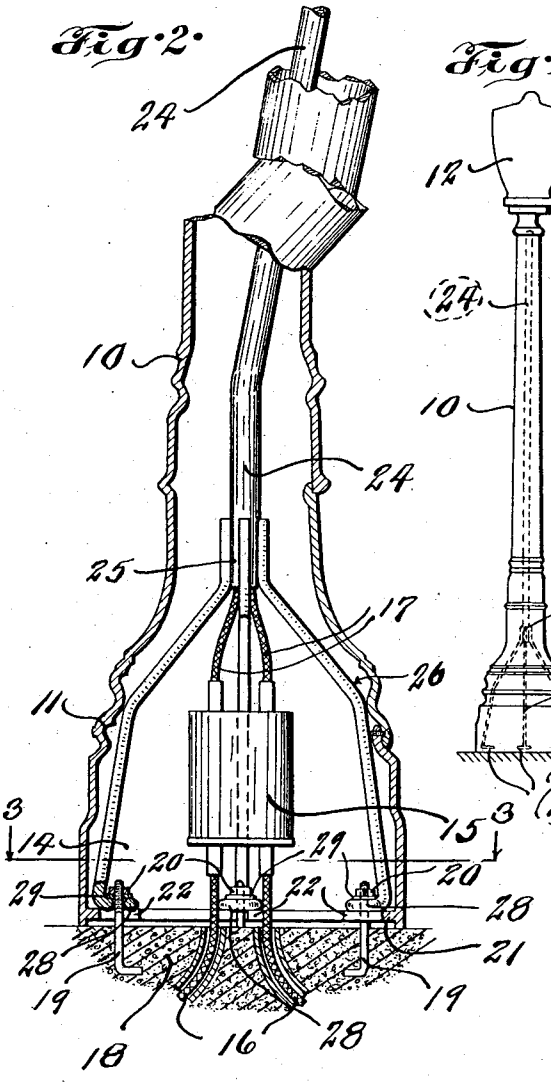


Fig. 1.

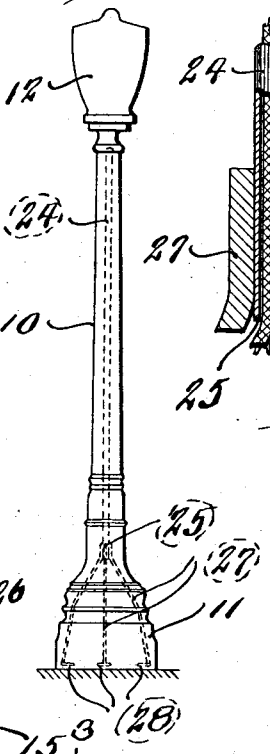


Fig. 4.

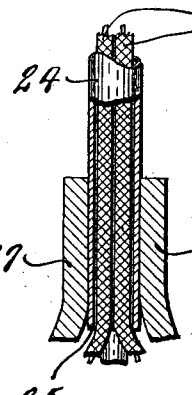
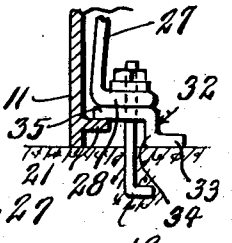


Fig. 6



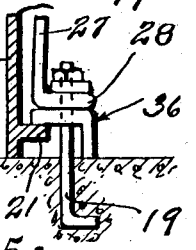


Fig. 7

Fig. 5.

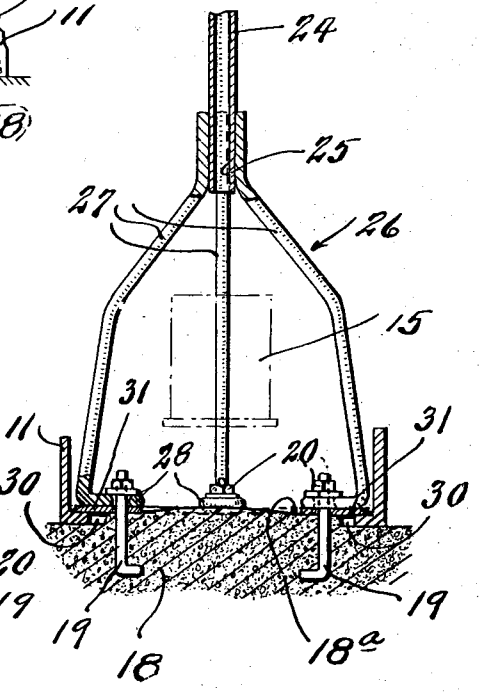
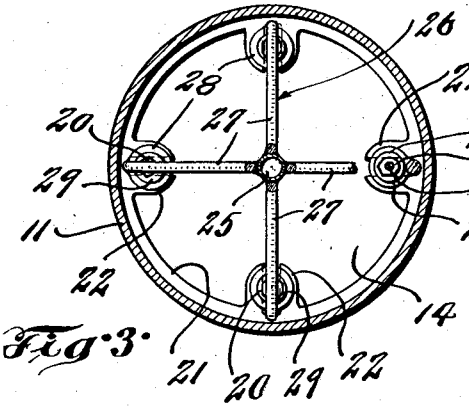


Fig. 3.



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Patented Sept. 23, 1930

1,776,682

UNITED STATES PATENT OFFICE

GEORGE G. KING, OF SHEFFIELD, ALABAMA, ASSIGNOR TO KING COMPANY, OF SHEFFIELD, ALABAMA, A CORPORATION OF OHIO

LAMP POST

Application filed December 26, 1927. Serial No. 242,533.

This invention relates to new and useful improvements in lamp posts, the objects of the invention being the provision of a lamp post which is so constructed that in case of breakage of the post by an automobile colliding therewith, or from other causes, said post will be prevented from falling and injuring pedestrians or occupants of the vehicle.

Further objects of the invention are to provide a safety device for use inside of hollow posts, said device being so constructed as to allow the use thereof with the existing type of hollow posts without interfering with the placing of electrical devices, such as individual transformers and disconnecting potheads, inside the base of the lamp post.

Other objects of the invention are to provide a safety device disposed within the lamp post in spaced relation therewith and co-extensive with the upper end thereof, the lower end of said safety device terminating in spaced divergent legs located adjacent to the base of the post so as to leave the central space of the base unobstructed for the reception of suitable electrical devices and at the same time form a strong support for the safety device which is in the form of a metallic tube designed to receive and absorb the impact delivered to the post.

Additional objects of the invention are to provide a safety device for lamp poles and other posts, which is co-extensive with such posts and does not obstruct the base thereof and which is highly efficient in performing its intended functions and can be economically manufactured and maintained.

With these and other objects in view, my invention consists of certain novel features and arrangements of parts hereinafter more fully described and claimed and illustrated in the accompanying drawings in which:

Figure 1 is a side elevation view of a lamp post equipped with my safety device.

Figure 2, is an enlarged vertical cross section taken through the lower end of said post and showing portions thereof broken.

Figure 3, is a horizontal cross section taken on line 3—3 of Figure 2.

Figure 4 is a enlarged vertical cross section taken through the lower end of the safety member and showing the support member secured thereto.

Figure 5 is a fragmental detail view showing a modified form of my invention.

Figures 6 and 7 are enlarged detail views showing modified forms of anchoring the lower ends of the support members in correlation with the bases of the posts.

The safety or retaining member consists of a metallic tube of appropriate dimensions and disposed in spaced relation within the hollow post. Heretofore, attempts have been made to use such safety member by supporting the lower end thereof in concrete foundation of the post. This arrangement has been found objectionable for several reasons. It prevented the installation of individual transformers, or other electrical devices, in the base of the post above the foundation, which location is dry, and of easy access through the door, with which each post is provided. Consequently it was necessary to provide a water proof vault below the side walk level and to one side of the base of the pole for containing the said electrical device. These walls are not only expensive but also inconvenient to reach, and are liable to leak, causing thereby a great deal of trouble, such as short circuit, injury to the device, etc. Also when the safety member or pipe extends into and is attached rigidly to the foundation, the leverage effect, when subjected to blows, is comparatively great thereby permitting said pipe to bend more readily.

In the present invention the safety member has its lower end terminating a suitable distance above the foundation and base of the post and is secured to the upper end of a spider member, the divergent legs of which are disposed concentrically about the axis of the post, thereby leaving the central space of the base of the post free of any obstruction so that the electrical device may be located therein as under the present practice, and furthermore, the steel rods comprising the spider have a certain amount of resiliency and serve as a cushion for the post at the time of the impact, thereby absorbing the

shock and reducing the breakage and injury to the post to a considerable extent.

Referring by numerals to the accompanying drawings, 10 indicates a hollow post or shell preferably having ornamental external finish, such as a lamp post provided at its lower end with an enlarged base portion 11 and carrying at its upper end a lamp fixture 12. The base 11 is enlarged to increase the stability of the post and provide proper anchor thereof and to form a chamber 14 for receiving the electrical devices such as an individual transformer 15. Underground cables 16 connect said transformer with the supply line and wires 17 lead from said transformer to lamp fixture 12.

The base 11 rests on concrete foundation 18, and is secured thereto in any suitable manner, in the present instance by means of anchor bolts 19 embedded in said foundation and having threaded ends projecting therefrom for receiving nuts 20. A horizontally disposed, inwardly projecting flange 21 is formed on base 11 adjacent to the lower edge thereof and formed integral with said flange and projecting inwardly therefrom at spaced intervals is a series of horizontally disposed extensions 22 which are slotted for the reception of bolts 19.

In order to prevent the fall of the pole or fragmental portion thereof, when broken under the impact with an automobile and in order to reduce the danger of injury to pedestrians and passengers of the automobile from such a pole, a safety or retaining member 24 is arranged within said pole preferably coaxially therewith and terminating adjacent to said lamp fixtures 12. This safety member is preferably in the form of a wrought iron tube of oppropriate dimensions so as to render it sufficiently strong whereby, when said post receives an impact sufficient to shatter said post, said safety member 24, will be caused to bend slightly under such impact and will serve to retain the broken portions of the post and prevent them from falling to the ground.

The lower end 25 of member 24 terminates a suitable distance above the base 11 and is secured to a spider member 26, the legs 27 of which diverge downwardly and outwardly and terminate in flanged feet, which may be in the form of horizontally disposed perforate lugs, 28. These lugs 28 may be adapted to rest on tops of extensions 22 and have their apertures coincide with the slots of the latter so as to receive threaded ends of bolts 19. A washer 29 is interposed between each nut 20 and lug 27 and when said nuts are drawn against said washers, said lugs 27 and extensions 22 are securely anchored to the foundation.

By the use of spider 26 the safety member 24 is held in spaced relation with the foundation of the post, and ample space is provided in the base of the latter for receiving the transformer, or other electrical devices. The legs or support arms 27 are formed of steel rods bent to proper shape and the upper ends of said legs are preferably welded to the lower end 25 of member 24 thereby forming a durable structure. These steel rods 27 possess a certain degree of resiliency and are therefore capable of absorbing shocks delivered to the structure.

The safety member 24, which is preferably made of a wrought iron tube of appropriate thicknes and diameter, extends the full height of post 10 in order to provide protection throughout the entire length of the post. The point of attachment 25 of the safety member 24 being spaced considerable distance above the foundation, in close proximity to the point of impact, the leverage thus produced is not as great as in the case where the safety member is secured to the foundation. Consequently, the damage and distortion of the safety member will not be as great as in the former case. Also a great portion of the impact will be absorbed by the steel rods or legs 27.

The modified form shown in Figure 5 discloses the foundation 18 formed with a central raised portion or tenon 18^a which is of smaller diameter than the inside diameter of base 11, thereby providing an annular clearance space 30. This clearance space allows the pole 10 to skid to some extent, when struck, thereby lessening the shock. A washer 31 covers this space and holds pole 11 in alignment.

In the modified form shown in Figure 6, a lug 32 is used to interengage the base 11 with anchor bolt 19 and ends 28 of legs 27. This lug is in the form of Z having one horizontal portion 33 resting on the foundation with the vertical portion 34 spaced suitable distance from bolt 19. The upper horizontal portion 35 is presented toward the peripheral well of base 11, and has its forward edge resting on flange 21. Portion 35 is apertured for the reception of bolt 19 and lug 28 rests on top of said portion. This construction does away with raised portion 18^a such as shown in Figure 5 and at the same time provides sufficient clearance for base 11 to limited movement thereof.

Figure 7 shows a modified form similar to that shown in Figure 6, the lug or clamp 36, however, being of angle shape, instead of Z shape. My improved construction, wherein the steel rods are combined with the wrought iron pipe, gives the strongest construction. This arrangement is much stronger and more efficient than such constructions, wherein the pipe is extended into, or attached direct to the concrete foundation. By employing this arrangement, the leverage effect on the pipe is materially reduced and the spring effect of the rods serves as a cushion for the post at

the time of the impact thereby preventing or greatly reducing breakage.

The post is further cushioned by employing wrought iron foundation lugs, which hold the post firmly to the foundation, and yet absorb most of the shock, preventing the breakage of post, except in cases of very violent accidents.

My improved safety pole construction is sufficiently strong to withstand and absorb normal impacts and retains broken section of the pole when the latter is shattered, thereby greatly reducing the danger from falling poles or fragments thereof in cases of accidents.

While I have disclosed herein the preferred form of my invention, I am aware that the invention may be embodied in other specific forms without departing from the spirit of my invention.

I claim:

1. In a lamp post construction, the combination with a hollow ornamental post having an enlarged base provided with inwardly projecting horizontally disposed slotted extensions at the lower end thereof, of a safety metallic tube disposed longitudinally and axially of said post, the full height thereof terminating short of said base, a spider member arranged in said base independently thereof and having its upper end permanently secured to the peripheral wall of the lower end of said tube thereby leaving said lower end open, said spider member having divergent leg portions terminating in horizontally disposed perforate feet, and detachable means for anchoring said extensions and said feet conjointly.

2. A lamp post construction comprising in combination a hollow ornamental post member having an enlarged base, and carrying a lamp fixture at its upper end, a hollow metallic safety member disposed longitudinally in said post and terminating adjacent to said fixture, the external diameter of said safety member being considerably less than the internal diameter of said post thereby providing substantial clearance therebetween and the lower end of said safety member terminating short of said base, a series of steel legs permanently secured at their upper ends to the peripheral wall of said safety member and diverging therefrom thereby leaving the lower end thereof open, and having their lower ends terminating in horizontally disposed feet, and means for engaging said feet in spaced relation with respect to said base and securing said post member and said safety member in their relative positions.

3. In a post construction, the combination of an external shell member supported on a foundation and adapted to carry at its upper end a fixture and provided with an enlarged base, a tubular member arranged axially in said shell and spaced throughout its entire length therefrom and terminating above the lower end of said base, a plurality of steel legs secured at their upper ends to the outside face of the lower end of said tubular member so as to leave said end free, said legs extending downwardly and obliquely, and having their lower ends terminating in perforate feet, and means for anchoring said feet to the foundation in spaced relation to said base, whereby the base of said shell member is supported independently of said tubular member and the said shell member can be shifted in a horizontal plane independently of said tubular member.

4. In a post construction, the combination of an external shell member supported on a foundation and adapted to carry a fixture on its upper end and provided with an enlarged base, a tubular member arranged axially in said shell member and spaced throughout its entire length therefrom and terminating above the lower end of said base, a plurality of steel legs extending downward and obliquely outward from the lower end of said tubular member so as to leave the opening therein free and having their lower ends terminating in flanged feet, and means for anchoring said feet to the foundation in spaced relation to said base, whereby the shell member is supported independently of said tubular member and can be shifted in horizontal plane independently thereof.

5. In a post construction, the combination of an external shell member supported on a foundation and adapted to carry a fixture on its upper end and provided with an enlarged base, an impact absorbing safety member arranged axially in said shell member and spaced throughout its entire length therefrom and terminating above the lower end of said base, a plurality of steel legs extending downward and obliquely outward from the lower end of said safety member and having their lower ends terminating in flanged feet, and means for anchoring said feet to the foundation in spaced relation to said base, whereby the shell member is supported independently of said tubular member and can be shifted in horizontal plane independently thereof.

In testimony whereof I hereunto affix my signature this 20th day of December, 1927.

GEORGE G. KING.