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G. M. C. LUCAS

1,794,467

ILLUMINATED FENCE

Filed Oct. 2, 1928

Fig. 1.

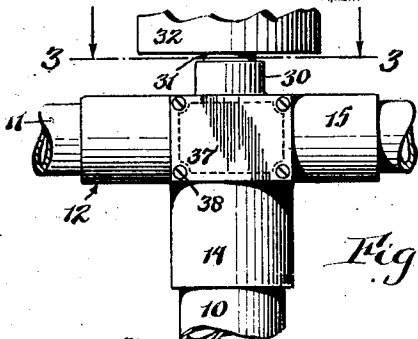
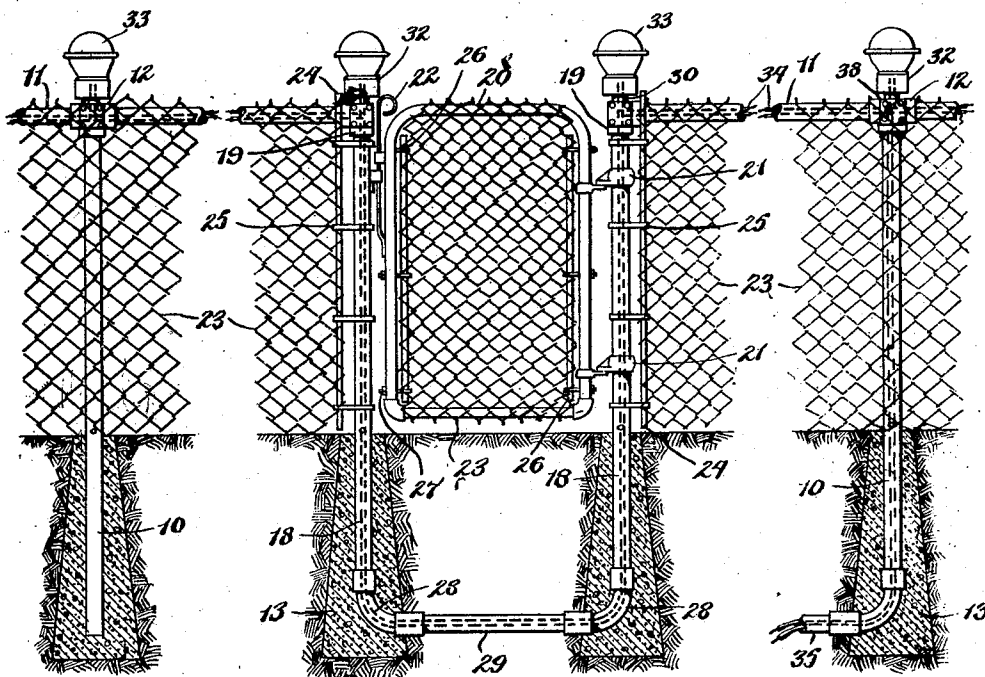


Fig. 2

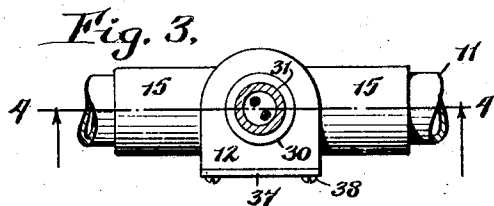


Fig. 3.

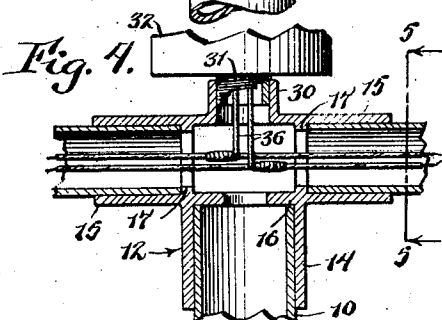


Fig. 4.

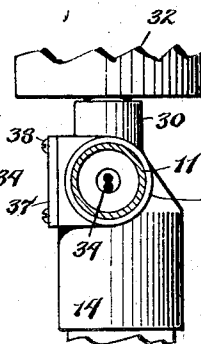


Fig. 5.

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UNITED STATES PATENT OFFICE

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ILLUMINATED FENCE

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This invention relates to an illuminated fence and more particularly to such a fence which is designed to enclose air ports and prevent the public from entering the field and subjecting themselves to the danger of the serious accidents which are liable to occur in air plane landing fields or hangars.

The principal object of this invention is to provide a strong, durable and inexpensive fence which is adequately lighted throughout its length thereby clearly showing the pilots of alighting planes the exact position of the fence and enabling them to avoid the danger of accidentally crashing into the same in landing. The illumination of the boundary fence also clearly demarcates the airport and greatly assists the aviator in getting his bearings and making a safe landing at night.

A further object is to provide such a fence which is as low as is practicable for its purpose and in which all overhead wires are eliminated. Such overhead wires and obstructions cannot be seen from the rapidly moving airplane, particularly at night, and constitute a very dangerous hazard about an airport. Moreover, due to the angle at which airplanes land, every obstruction cuts off seven times its length in the effective area of the airport and consequently all such obstructions, such as wires and the like, greatly reduce the effective size of the airport.

A further object is to provide such an illuminated fence in which the wires are completely concealed and protected within the fence members and in which the electric light fixtures are adequately protected against the weather and accidental injury.

A further aim is to provide a fence of this character which is provided with covered openings permitting the concealed wires to be repaired readily at their place of connection with the electric light fixtures thereby facilitating the installation, inspection and repair of the wires.

Other aims are to provide such a fence which is extremely strong, which is composed of inexpensive parts and can be erected with little expense, thereby permitting of the installation of such fences with-

in the curtailed appropriations usually made for airports.

In the accompanying drawings:

Figure 1 is a fragmentary side elevation of an airport fence made in accordance with my invention.

Figure 2 is a fragmentary side elevation of the fence at the place of juncture between the posts, the horizontal rails and the electric fixture.

Figure 3 is a horizontal sectional view thereof taken on line 3—3, Fig. 2.

Figure 4 is a vertical sectional view taken on line 4—4, Fig. 3.

Figure 5 is a fragmentary vertical sectional view taken on line 5—5, Fig. 4.

Similar reference numerals refer to like parts in each of the several views.

The supporting members of the fence include tubular intermediate supporting posts 10, tubular rails 11 between these posts and hollow fittings 12 connecting the upper ends of the posts and the rails. The posts are sufficiently heavy to provide a durable support for the fence and the lower end of each post is set into a concrete base or bed 13 in the ground. This concrete base or bed preferably completely surrounds and seals the lower end of the post and terminates at the surface of the ground in the usual manner.

Each of the fittings 12 at the top of each intermediate post 10 is adapted to connect the post with the two adjacent rails 11 and as best shown in Figs. 2-5 is formed to provide a downward tubular extension 14 and two laterally extending portions 15. The downward tubular extension is adapted to receive the upper end of the intermediate post 10 and to limit its downward movement thereon an annular abutment or bead 16 is provided within the fitting against which the upper end of the fence post rests, as shown in Fig. 4. In the same manner, annular beads or abutments 17 are provided within the lateral tubular extension 15 and serve to limit the inward movement of the tubular rails 11. By this means it is apparent that the fence rails, posts and hollow fittings together form a continuous conduit which is adapted to receive the wires

supplying electricity for illuminating the fence.

At suitable intervals gates are provided in the fence and for this purpose gate posts 18 are provided which are similar to the intermediate posts 10. Each gate post is connected with the adjacent rail 11 by a fitting 19 which is similar to the fittings 12 of the intermediate posts except that the gate post fitting 19 is provided with only one lateral tubular extension 15 since it only connects with one rail.

The gate 20 may be of any suitable construction and is hung on hinges 21 which are carried by one of the gate posts. To hold the gate in its closed position any suitable form of latch 22 may be employed to secure the gate to the other gate post and prevent the same from being opened except when released.

Both the gate 20 and the fence frame are covered by a wire fencing 23 which is preferably of the chain or link type. This fencing is preferably secured to vertical end bars 24 and is secured at intervals to the fence rails 11. Each of the end bars against which the wire fencing 23 is drawn is preferably rigidly secured to the corresponding gate post 18 by brackets 25 so that the fencing is securely held at its ends. In a similar manner the wire fencing covering the gate is held between two bars 26 connected by bolts 27 to the gate frame and is secured at its upper and lower edges to the upper and lower rails of the gate.

At the lower ends of the gate posts 18, elbows 28 are provided and to these elbows is secured a pipe 29 which extends between the gate posts and forms a subterranean conduit therebetween.

Each of the fittings 12 and 19 at the upper end of the fence posts is provided with an upwardly extending internally threaded neck 30 which forms a socket for the reception of the threaded neck 31 of the base of an electric light fixture 32. This base carries the usual electric light bulb (not shown) which is covered by a glass globe 33. One of these fixtures is mounted on each fitting at the top of each fence post and consequently the entire fence is adequately illuminated its entire length.

The insulated line wires 34 which supply current for illuminating the electric lights at each fence post are introduced into the fence through an underground conduit 34 which is connected with any one of the fence posts. The wires from this conduit pass up through the fence post and run along through the tubular rails 11 and the fittings 12 and 19 as indicated in Fig. 1. When a gate is encountered, the wires 34 are passed through the fitting 19 at the upper end of the gate post 18, down the gate post 18 across the underground pipe 29 connecting the lower ends of the gate

posts and up the opposite gate post and thence on along the fence rails on the opposite side of the gate. By this means it will be observed that the wire is at all times carried within the members forming the fence, and are adequately protected from the effects of weather or other injuries.

By providing an underground conduit to the fence, all overhead wires are eliminated and consequently this hazard to the safety of aviators is avoided.

Each of the electric light fixtures 32 is provided with the usual wires 36 which extend through the neck 31. These wires as indicated in Fig. 4 are connected in parallel with the line wires 34 in the usual manner and consequently all of the lights are illuminated from the main line wires. To facilitate the threading of the line wires 34 through the fence members and also to permit of connecting, inspecting and repairing the fixture wires 36 connected therewith, openings are provided at one side of each of the fittings 12 and 19 which openings are covered by plates 37. These plates are secured in place by screws 38 or in any other suitable manner.

As a whole this invention provides a fence for airports or the like which is adequately illuminated by lights arranged at each fence post and in which there are no exposed or overhead wires. The fence is also extremely simple and durable in construction and can be erected at low cost.

I claim as my invention:

1. A fence composed of open ended hollow post members, open ended hollow rail members, hollow fittings connecting said post and rail members, said rail members and hollow fittings jointly providing a continuous, uninterrupted, enclosed conduit along the fence, a plurality of electric lights spaced along the fence rail and supported by the fence and electric wires arranged in said conduit and connected with said lights.

2. A fence composed of open ended hollow post members, open ended hollow rail members, hollow fittings connecting said post and rail members, said rail members and hollow fittings jointly providing a continuous, uninterrupted, enclosed conduit along the fence, an electric light carried by a number of said fittings and electric wires arranged in said conduit and connected with said lights to illuminate the same.

3. A fence composed of a plurality of tubular posts, a plurality of tubular rails between said posts, hollow fittings mounted on the tops of said posts and having portions receiving the ends of said rails, said rails and fittings jointly forming a continuous, uninterrupted, enclosed conduit along said fence and said fittings being formed to receive and support the base of an electric light fixture, wires arranged in said conduit and connected with each of said electric light fix-

tures, and wire mesh fencing carried by said rails and posts.

4. A fence composed of a plurality of tubular posts, a concrete base supporting each of said posts, tubular rails between said posts, hollow fittings mounted on the tops of said posts and receiving the ends of said tubular rails, said fittings forming with said rails and posts a continuous, uninterrupted, enclosed conduit and said fittings being formed to receive the bases of electric light fixtures, wires arranged in said conduit and extending the entire length of the fence and connected with each of said electric light fixtures and wire mesh fencing carried by said rails and posts.

and receiving the ends of said tubular rails, said fittings forming with said rails and posts a continuous conduit and said fittings being formed to receive the bases of electric light fixtures, wire mesh fencing carried by said rails and posts, a cross conduit connecting the lower ends of said gate posts and an electric wire extending through said tubular rails, fittings, gate posts and the conduit connecting the lower ends of said gate posts, said wire being connected with each of said electric light fixtures.

In testimony whereof I hereby affix my signature.

GEORGE M. C. LUCAS. 80

5. A fence composed of a plurality of tubular posts, a concrete base supporting each of said posts, tubular rails between said posts, hollow fittings mounted on the tops of said posts, each of said fittings comprising a downward tubular extension receiving the upper end of the corresponding post, an abutment limiting the downward movement of said fitting relative to said post, at least one lateral tubular extension receiving the end of the corresponding rail, an abutment limiting the inward movement of the corresponding rail relative to said fitting and an upward extension adapted to receive the base of an electric light fitting, said posts, fittings and rails together forming a continuous conduit, electric light fixtures carried by said fittings, wires arranged in said conduit and connected with said fixtures and a wire mesh fencing carried by said rails and posts.

6. A fence composed of a plurality of tubular posts, a concrete base supporting each of said posts, tubular rails between said posts, hollow fittings mounted on the tops of said posts, each of said fittings comprising a downward tubular extension receiving the upper end of the corresponding post, an abutment limiting the downward movement of said fitting relative to said post, at least one lateral tubular extension receiving the end of the corresponding rail, an abutment limiting the inward movement of the corresponding rail relative to said fitting and an upward extension adapted to receive the base of an electric light fitting, said posts, fittings and rails together forming a continuous conduit, electric light fixtures carried by said fittings, wires arranged in said conduit and connected with said fixtures, said fittings being provided with openings at one side, a cover removably arranged over each of said openings, thereby permitting said wires to be inspected or repaired at their place of connection with said fixtures and a wire mesh fencing carried by said rails and posts.

7. A fence composed of a plurality of tubular posts at least two of which form gate posts, tubular rails between said posts, hollow fittings mounted on the tops of said posts

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