S. LEICHNER.

ILLUMINATED FOUNTAIN.

APPLICATION FILED NOV. 6, 1912.

1,083,449. Patented Jan. 6, 1914.

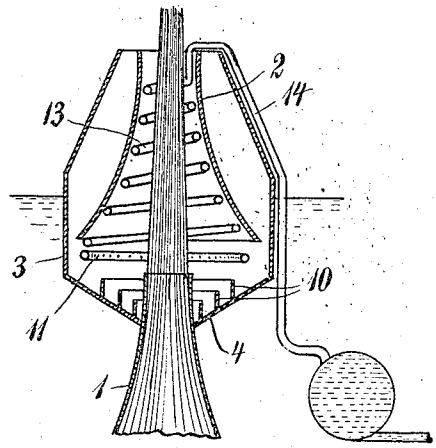


Fig. 1

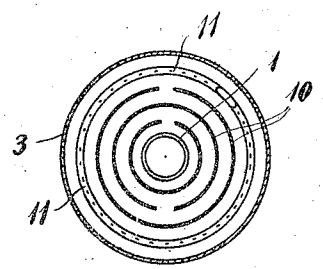


Fig. 2

Witnesses:
P. Dommers
E. Leckert.

Inventor.
Siegfried Leichner
By Munn & Co
atty.

UNITED STATES PATENT OFFICE.

SIEGFRIED LEICHNER, OF GRUNEWALD, NEAR BERLIN, GERMANY.

ILLUMINATED FOUNTAIN.

1,083,449. Specification of Letters Patent. Patented Jan. 6, 1914.

Application filed November 6, 1912. Serial No. 729,812.

To all whom it may concern:

Be it known that I, SIEGFRIED LEICHNER, citizen of the Empire of Germany, residing at Grunewald, near Berlin, Germany, have invented certain new and useful Improvements in Illuminated Fountains, of which the following is a specification.

My invention relates to an illuminated fountain, in which the liquid jet is surrounded by a mantle of combustible substances, which, in burning, present the appearance of a fountain consisting entirely of jets of fire.

The chief feature of the new device consists in the fact that either gas is used as a combustible, or that in the path of the combustible liquid forming the illuminating mantle of the water jet, a spraying device or vaporizer is provided, which distributes the combustible liquid in the form of a finely divided cloud, which is then mixed with air and ignited. By this fine distribution of the combustible an increased illumination is effected and an economy effected. The drawback of older constructions wherein non-vaporized combustible, for example alcohol or benzin float on the surface of the water in the pond or basin is completely avoided. The benzin also burns in the new nozzle-device without evolving smoke, and much more economically than in older constructions.

Of special advantage is a vaporizer in which the combustible is evaporated by its own heat of combustion. The combustible is fed through spiral pipes which are perforated several times at the bottom and are strongly heated by the blast flames formed by the air suction of the water jet. The consequence is that the liquid is soon entirely evaporated. Its vapor is drawn up by the injector action of the jet and burns with a smokeless illuminating flame.

The drawing shows the improved illuminating fountain by way of example.

Figure 1 a vertical section of a construction having a vaporizing coil, and Fig. 2 a horizontal section immediately over the jet pipe.

In the construction, which is provided with a vaporizer, the jet pipe 1 is surrounded by an injector pipe 2 and outer casing 3. The bottom 4 of the outside casing 3 is inclined downward toward the middle and carries several annular ridges or walls 10, forming concentric troughs and which are provided with openings at angles of 180° to each other, so that liquid introduced into the outermost annular channel will flow in a long zig-zag line to the middle and thus obtain ample time to completely burn.

Outside of the outermost wall 10 is situated the last perforated winding 11 of a pipe coil 13, which descends along the wall of the injector casing 2 in windings of increasing size from the top to the bottom. This coil 13 is connected at the top by a pipe 14 to a benzin reservoir and allows benzin to enter into the bottom 4 which serves as a heating tray. This benzin is ignited and heats the evaporator coil 13 until vapor alone escapes out of the same. The vapor is ignited together with the air sucked into the annular space between both casings 2, 3 by the injector action of the water, and the burning mixture is drawn out by the water jet and ascends therewith.

I claim:

1. An illuminated fountain, comprising a water nozzle, a casing inclosing said nozzle, a perforated vaporizer coil within said casing, and a plurality of channels formed on the bottom of the casing and communicating with each other at different points.

2. An illuminated fountain, comprising a water nozzle, a converging injector pipe mounted above the nozzle, a casing open at the top surrounding the nozzle and injector pipe, and having an inverted conical bottom, a plurality of concentric partitions mounted on said bottom having openings at angles of 180° to each other, and a vaporizer coil inside the injector pipe, the lower portion of said coil being perforated and extending outside said partitions.

In testimony whereof I affix my signature in presence of two witnesses.

SIEGFRIED LEICHNER.

Witnesses:

WOLDEMAR HAUPT,

HENRY HASPER.