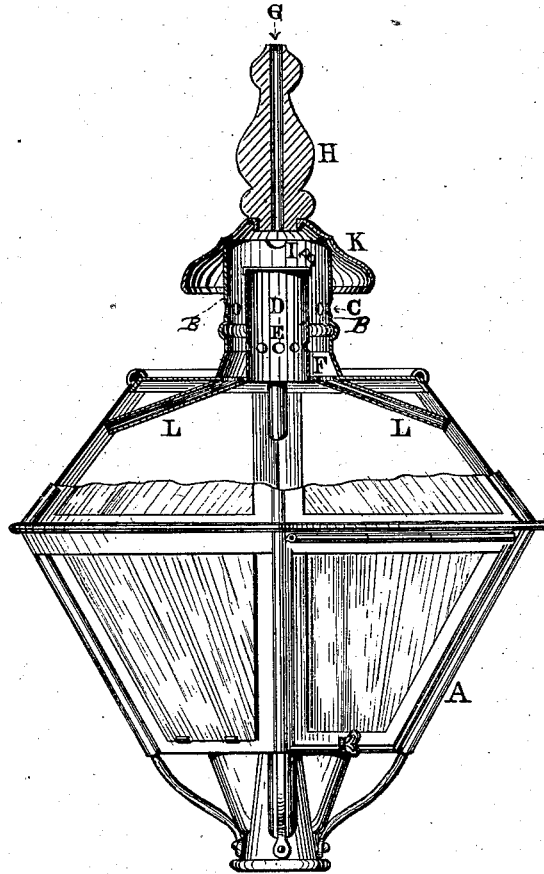


J. HENRICH.
Street-Lamp.

No. 164,681.

Patented June 22, 1875.



WITNESSES:

Carl Windrath
Mordimer M^r Call

INVENTOR:

John Henrich,
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UNITED STATES PATENT OFFICE.

JOHN HENRICH, OF BUFFALO, NEW YORK.

IMPROVEMENT IN STREET-LAMPS.

Specification forming part of Letters Patent No. **164,681**, dated June 22, 1875; application filed June 7, 1875.

To all whom it may concern:

Be it known that I, JOHN HENRICH, of Buffalo, in the county of Erie and State of New York, have invented a Street and Park Lamp; and I do hereby declare that the following is a full, clear, and exact description of the same.

Street-lamps, being exposed to the various climatic influences and changes, are liable to serious objections, when constructed in a manner as now in vogue, among which the blowing out of the flame in stormy weather, and the accumulation of snow and ice in the inside of the lamp, and especially in the dome, are the principal ones. The accumulation of ice and snow in the dome particularly is a great obstacle in these lamps, and it is not at all uncommon that during heavy snow-storms the whole top is filled with a mass of snow forming a solid body, which, when the lamp is lighted, will partially melt and drop upon the burner, and thus extinguish the flame. Many cases of this and similar kinds have come under my observation, and they were the cause of a series of experiments that resulted in my present invention, which consists in the combination of the following elements, to wit: An annular air-space around an inner dome; a series of perforations in the inner, and another series in the outer, shell of the said dome, arranged at some distance above each other; a number of excisions in the dome near and under the deflector; a conductor in the upper part or extension of the dome, and a number of conduits leading from the before-mentioned annular space into the inside of the lamp, all as hereinafter more fully described, and pointed out in the claims, whereby I am enabled to overcome the objections above referred to, and whereby I produce a lamp of superior quality.

In order that others skilled in the art to which my invention pertains may be enabled to make and use the same, I shall proceed to describe its particulars, and thereby refer to the figure on the accompanying drawing, which illustrates my lamp in a longitudinal elevation, parts being broken and in section.

A is the body proper of my lamp. It consists of a frame of metal, properly glazed, and provided with the usual door to obtain access to the lamp-burner. Although this frame may

be made of almost any material, I prefer to construct it of copper, to provide against corrosion, and brace the same by iron rods in a substantial manner. This frame may be ornamented to suit the various tastes or requirements, and may be made either round, square, hexagonal, octagonal, globe-shaped, or any other plane or fancy form. The top plate of the frame A I provide with a dome, B, perforated with a number of openings, C, serving as outlets for the ascending products of combustion. Within the same I place a cylinder, D, capped on its upper end, and attached to the top plate of the frame on its lower edge. This inner shell D is of a diameter sufficiently smaller than the outer one so as to leave an annular space, F, and it is provided with a number of apertures, E, arranged in such a manner as to be considerably lower than those in the outer shell B. In the upper edge of the shell B I make a number of excisions, I, directly under the deflector K, whereby a circuit of the atmosphere through the dome-extension H is established.

The arrangement, as described, is such that when the products of combustion from the flame ascend, they will pass through the apertures in the inner shell D into the annular space F, and thence partially escape through the perforations C, and partially through the duct G, thus producing a swift current within the said annular space, so that the wind in stormy weather, when encountering this upward current, will be checked, and prevented from extinguishing the flame. This arrangement also prevents to a great extent, if not entirely, the accumulation of snow and ice within the chamber D, as when snow has entered the annular space F it will soon fill up this space, and cover up the openings E, which form the only communication with the chamber D. The heated air, ascending, will impart sufficient heat to the top of the lamp to cause the snow and ice contained in the annular space to melt, which takes place directly after the burner is lighted; and in order to convey the water thus produced to a place where it will be prevented from doing harm, I attach a number of pipes, L, to the lower side of the top plate and within the lamp-body, which will form conduits between the said

annular space F and the inner space of the lamp, where the water is kept at such a temperature that the coldest atmosphere could not convert it into ice before it escapes through a number of apertures in the bottom of the lamp.

It will be plainly seen that the improvements, as described, add largely to the usefulness of the lamps, although they will not materially enhance their cost of manufacture, and that the said improvements are applicable to lamps of almost any construction, or to lanterns, and the like.

Having thus fully described my invention, I desire to secure to me by Letters Patent the following claims:

1. The combination, with a lamp-body, A, of the perforated dome B, perforated inner chamber D, annular space F, and the duct G, all arranged and constructed substantially as described, and for the use and purpose set forth.

2. The combination, with the dome B, of the annular space F and a series of conduits, L, arranged within the lamp-body A, substantially in the manner and for the use and purpose as set forth and described.

3. The combination, with the lamp-body A, of the perforated dome B, provided with the excisions I, inner perforated shell D, arranged to produce the annular space F, conduits L, deflector K, and the upper dome-extension H, provided with the duct G, the whole when constructed and arranged substantially as described, for the use and purpose set forth.

In testimony whereof I have hereto set my hand and seal in the presence of two subscribing witnesses.

JOHN HENRICH. [L. s.]

Witnesses:

MICHAEL J. STARK,
WILLIAM HENRICH.