

H. H. BURTON.
Fountain-Jet Pipes.

No. 156,979.

Patented Nov. 17, 1874.

Fig. 1.

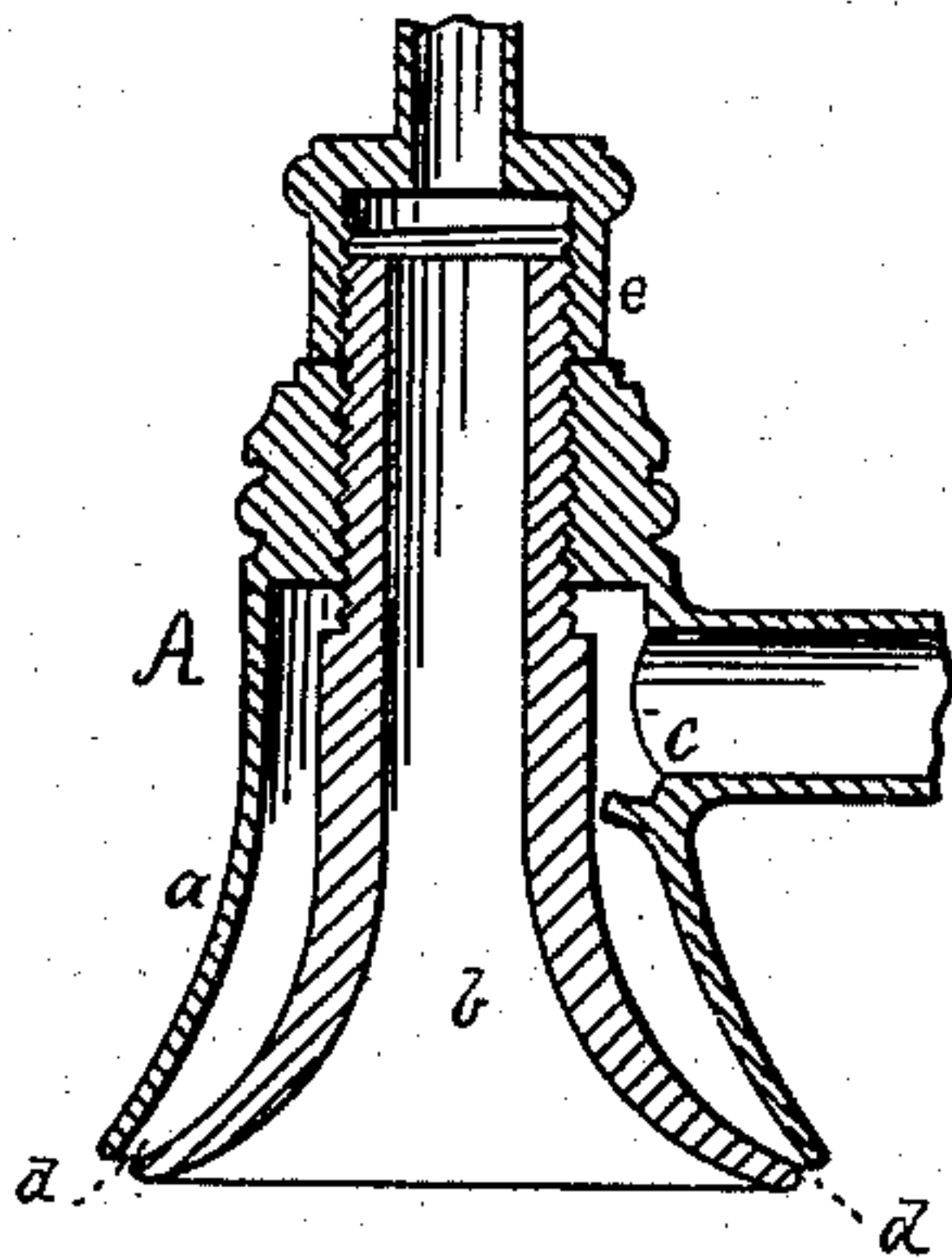


Fig. 2.

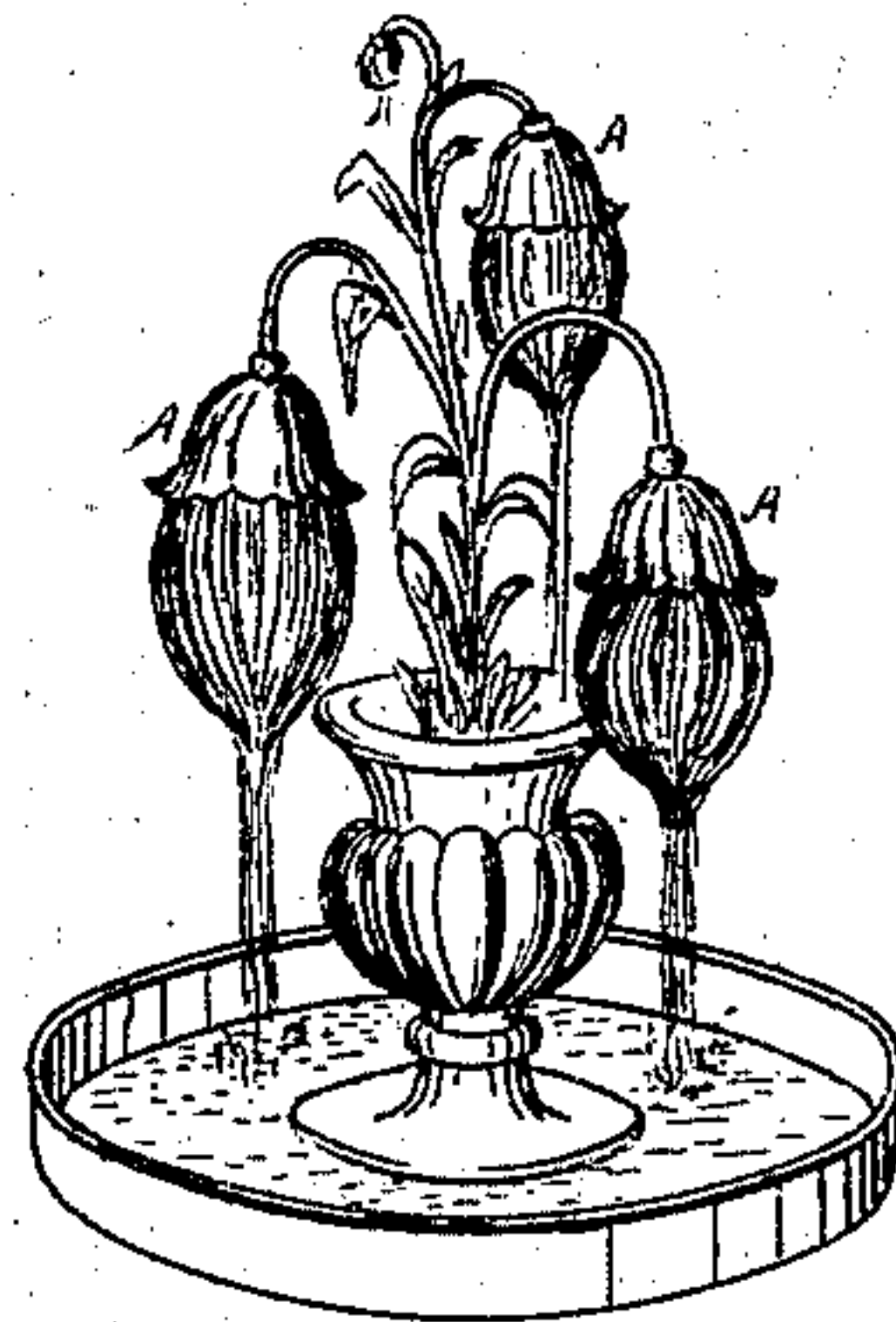


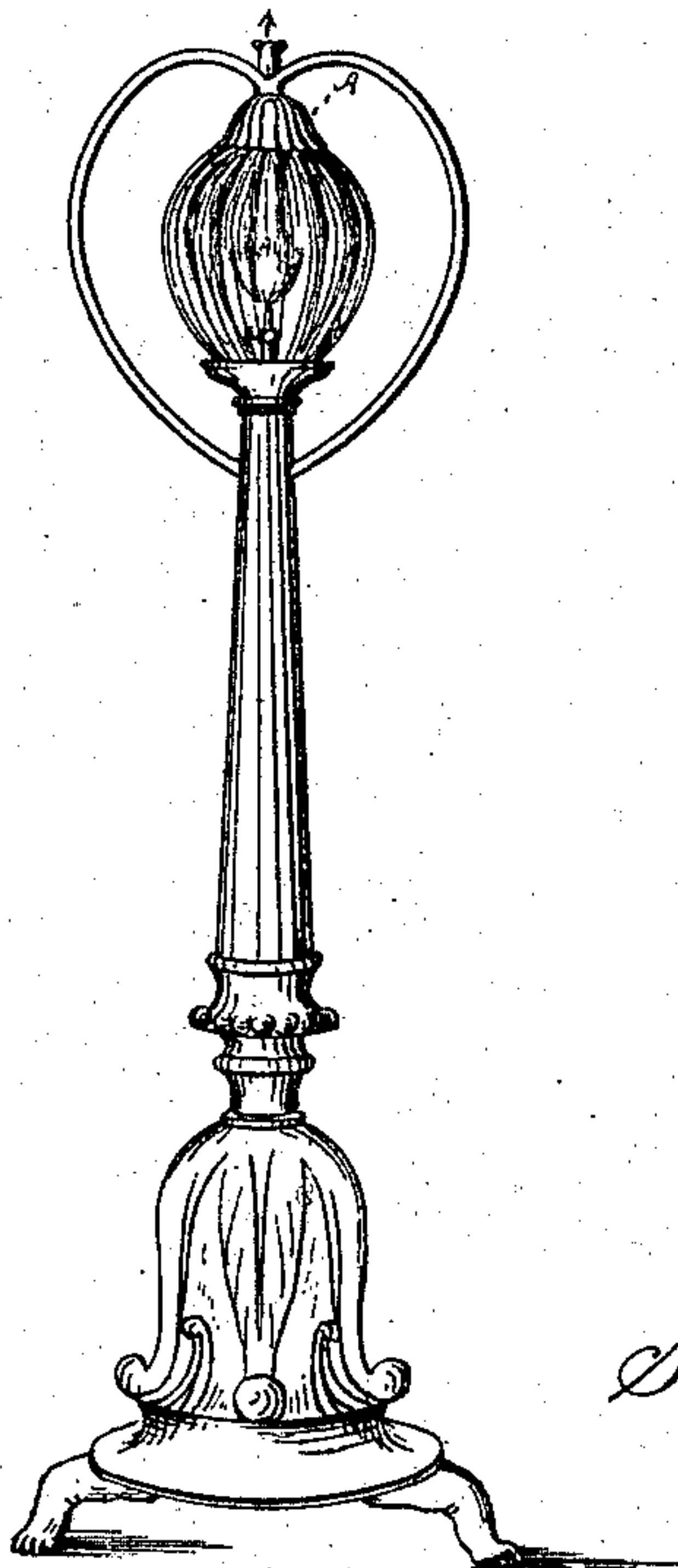
Fig. 3.



Fig. 4.



Fig. 5.



Witnesses
Philip A. Garner
A. B. Cauldwell

Inventor.
Henry H. Burton,
By *Mrs. Wood*
Attorney

UNITED STATES PATENT OFFICE.

HENRY H. BURTON, OF WASHINGTON, DISTRICT OF COLUMBIA.

IMPROVEMENT IN FOUNTAIN JET-PIPES.

Specification forming part of Letters Patent No. 156,979, dated November 17, 1874; application filed November 10, 1874.

To all whom it may concern:

Be it known that I, HENRY H. BURTON, of the city of Washington, in the District of Columbia, have invented a certain new and useful Fountain Jet-Pipe; and I do hereby declare that the following specification, taken in connection with the drawings furnished and forming a part of the same, is a clear, true, and accurate description thereof.

In ornamental fountains heretofore constructed the discharged water has been made to assume various forms, more or less closely resembling in outline forms of beauty found in nature or produced by art. Much attention and study has for years been bestowed by persons skilled in the art with a view to producing on the flying or falling streams beautiful effects in the light of the sun, moon, and gas light.

By means of my novel fountain jet-pipe the water is made to assume a form never before attained to my knowledge, and affords, in connection with any natural or artificial bright light, effects which are peculiarly beautiful.

My invention consists in constructing the jet-pipe in the form of a flaring-mouthed bell, composed of an outer and an inner shell, so arranged with relation to each other as to afford an annular discharge-aperture at its flaring end, and an interior vertical annular chamber, with which the water-supply pipe connects, whereby, when in proper position, the water will be discharged therefrom radially and downward, and caused to assume the form approximating to that of a more or less elongated hollow globe, from the lower side of which the water is continuously falling in a more or less solid stream.

Referring to the drawings, Figure 1 represents one of my jet-pipes in central vertical section. Figs. 2, 3, 4, and 5 represent different styles of standards, to which my jet-pipe may be attached.

A denotes the jet-pipe. It is composed of an outer bell-shaped shell, *a*, and an inner bell-plate, *b*. Between their practically coincident surfaces is a vertical annular water-chamber, with which the water-supply pipe *c* communicates. At the lower or flaring edge of the jet-pipe the bell-plate is so arranged with relation thereto as to afford an annular discharge-aperture at *d*. For adjusting the

discharging capacity of this aperture, I provide the bell-plate with a screw-neck, which engages with the threaded interior of the neck of the jet-pipe, so that by turning the bell-plate it may be raised or lowered. It is secured, when so adjusted, by means of the set-nut *e*. When employed in connection with gas-lights, as hereafter described, the bell-plate has a hollow neck, for allowing the heated air to freely rise. When constructed as shown, the water enters the annular water-chamber from the supply-pipe, and is forced in a thin film downward and outward in curved lines, which assume the form of an unbroken hollow elongated globe, and falls therefrom continuously in a more or less broken column, as illustrated in the several figures.

In Fig. 2 I illustrate a standard embodying a floral design, consisting of a vase containing the imitation of a flowery shrub, composed of iron or other suitable material. Several bell-shaped flowers are each provided with my jet-pipe, and from them the water is discharged in the form of an elongated globe, with an outline consistent with the character of the flower—as, for instance, in imitation of the flower of the fuchsia.

In Fig. 3 the jet-pipe standard is that of a frog with a tobacco-pipe, blowing therefrom a continuous bubble.

In Fig. 4 the statue of a water-nymph is employed as a standard.

In Fig. 5 the jet-pipe and the bell-plate may be correspondingly corrugated at the discharge-aperture, so that the globular film will be peripherically corrugated in vertical lines. This corrugation may be readily effected after the jet-pipe has been completed, with plain edges, by compressing it in an annular corrugated bed-die, with a correspondingly-corrugated male die.

In standards like that shown in Fig. 5 a gas-pipe is located within, or parallel with, the vertical water-pipe, and provided with a gas-burner located a short distance below the jet-pipe. The water is conveyed to the jet-pipe by the way of the bow-pipes shown. Below the burner is a flaring basin, which is provided with a waste-pipe, which extends downward within the standard. When so arranged the water is discharged from the jet-pipe in an un-

broken film, globular in form, and enters the basin below. The gas-light is thereby wholly inclosed within a corrugated globe of water. The effect produced by this combination is peculiarly novel and pleasing. In the sun-light the reflections cast by the smooth glassy surface of the globular film are constantly changing with the swaying of the globe to and fro, incident to light breezes. When employed in connection with statuette standards, it will be deemed a desirable feature that the figure be represented as blowing soap bubbles; and this can be effected by locating in the vertical supply-pipe a pulsating valve, which, being operated by the flowing water, will intermittently allow the water to be discharged from the jet-pipe, so as to form a continued succession of globules. Instances of such valves are too well known to require specific designation, and they may be of the class which involves the ball principle, or the rotating valve operated by water, which at alternate intervals will be discharged into a waste-pipe below the standard, and into the supply-pipe which connects with the jet-pipe. However my novel jet-pipe may be mounted, beautiful and novel effects will be produced. When inverted, bell-mouth upward, it discharges a jet the body of which resembles the transparent bowl of an urn or vase, over the edges of which water is continuously falling. The tendency is for the water to fall inward when the jet-pipe is turned upward, and a beautiful effect may be attained by combining with my upward-turned jet a funnel, composed, for instance, of highly-colored glass, into which all of the inward-fall-

ing water will be delivered, leaving the exterior of the jet to represent the bowl of an urn, on which the play of lights and shadows will be beautifully displayed.

The hollow neck of a jet-pipe as herein shown constitutes, in part, the subject of a separate claim in another distinct application for Letters Patent in connection with urinals, &c.

I am aware that fountain jet-pipes have heretofore been constructed which were composed of an upper and lower concavo-convex plate arranged with their concave sides facing each other, and with the water-supply pipe connected thereto by passing upward through the lower plate. Such jet-pipes have an annular discharge-orifice, through which a jet is discharged in a thin circular film. Sometimes the jet has been curved downward, and sometimes upward. In no instance, however, heretofore known to me has a jet been thrown in a spheroidal form.

Having thus described my invention, I claim as new—

A jet-pipe for ornamental fountains, composed of an exterior flaring-mouthed pipe and an interior bell-plate, in combination, and arranged with relation to each other, substantially as described, whereby an annular water-chamber and an annular outwardly-curved discharge-aperture is afforded between their practically coincident surfaces, as specified.

HENRY H. BURTON.

Witnesses:

THOMAS C. CONNOLLY,
A. E. BEECHER.