

(No Model.)

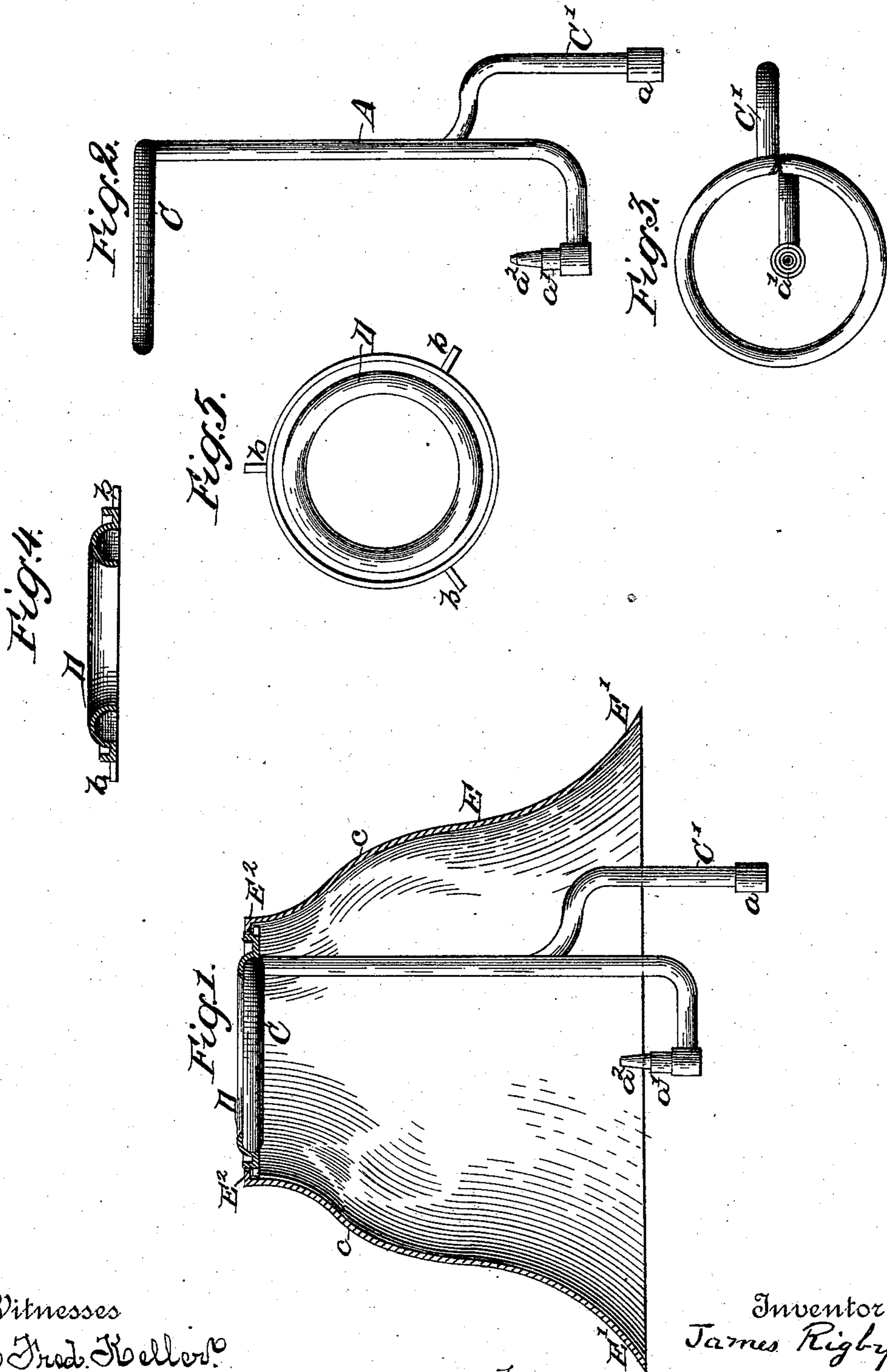
2 Sheets—Sheet 1.

J. RIGBY.

GAS EXPANDER AND SHADE HOLDER.

No. 365,539.

Patented June 28, 1887.



Witnesses
L. Fred. Keller
Vernon M. Hovey

Inventor
James Rigby
By His Attorney
H. J. England.

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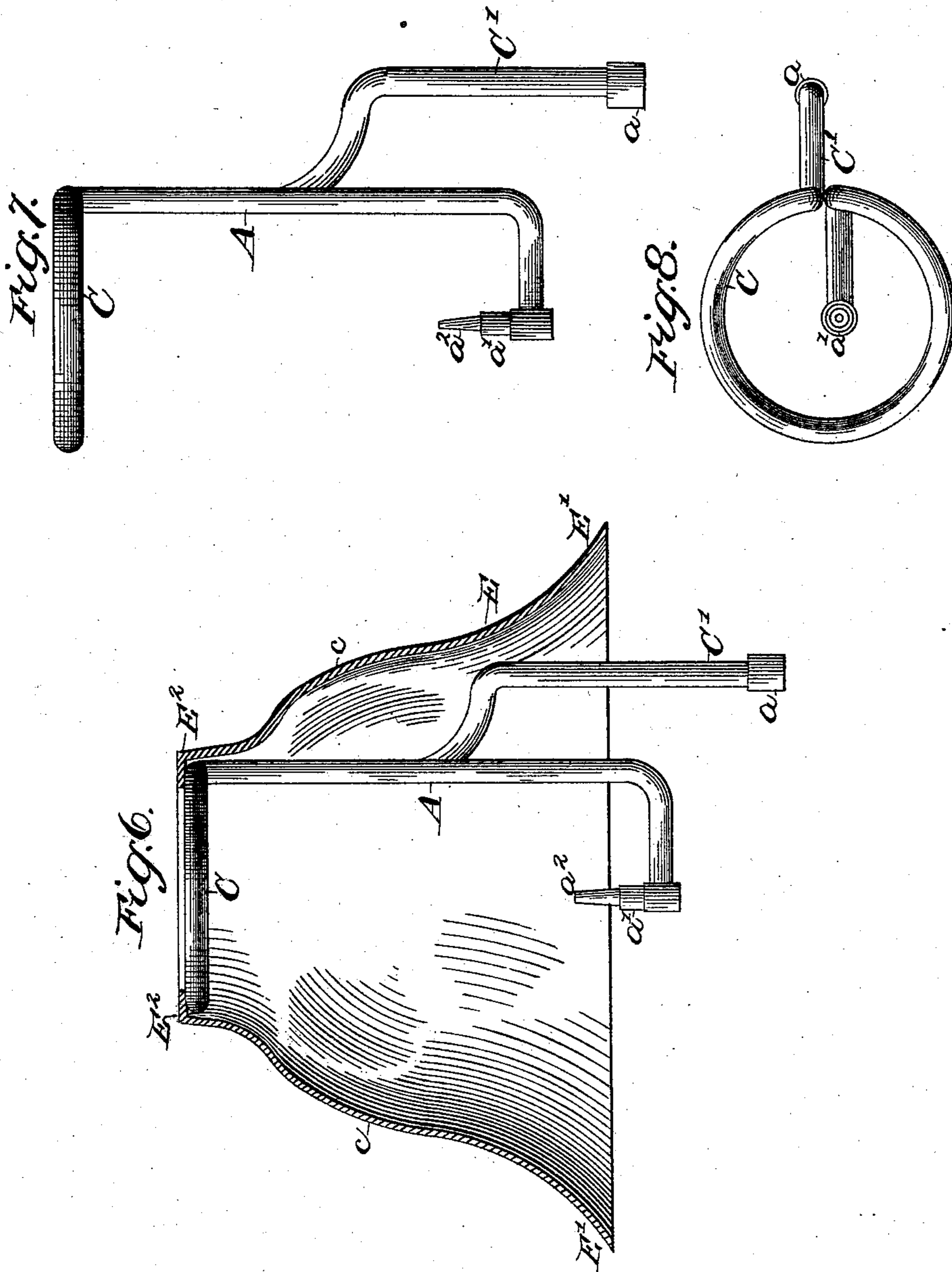
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UNITED STATES PATENT OFFICE.

JAMES RIGBY, OF MINNEAPOLIS, MINNESOTA.

GAS-EXPANDER AND SHADE-HOLDER.

SPECIFICATION forming part of Letters Patent No. 365,539, dated June 28, 1887.

Application filed January 3, 1887. Serial No. 223,249. (No model.)

To all whom it may concern:

Be it known that I, JAMES RIGBY, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Gas-Expanders and Shade-Holders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in gas-expanders and shade-holders; and it consists in a gas-pipe bent to form a circle or ring or series of rings above the gas-jet and form a support for globes and shades.

The object of my invention is to form a cheap and durable support for globes and shades above the flame, and at the same time bend the gas-pipe, so it will receive the ascending heat thrown off from the burning jet below. I attain these objects by means of the peculiar construction and arrangement of the various parts of my device, which will be more fully pointed out and described in the specification and claims, reference being had to the drawings accompanying this application and forming part of the same, in which—

Figure 1 is a perspective view of the gas-pipe and vertical view of shade and attachments. Fig. 2 is a perspective view of the bent gas-pipe. Fig. 3 is a top plan view of pipe, showing circle-rest for globe. Fig. 4 is a vertical sectional view of shade-holder. Fig. 5 is a perspective view of shade-holder. Fig. 6 is a vertical and sectional view of pipe and shade. Fig. 7 is a side elevation, and Fig. 8 is a top sectional view, of same.

Similar letters refer to like parts throughout the drawings.

Referring to the drawings, A represents a gas-pipe, which is bent near its center to form a ring, C, the outer end, C', being curved outward and provided with a coupling-ring, *a*, by which it is joined to an inflow-pipe, (not shown,) through which gas is forced into pipe A. The opposite end of pipe A is curved inward and outward, and provided with a reducing-section, *a'*, and the ordinary gas-jet, *a''*.

An annular ring, D, is formed of any suitable material, (preferably of metal,) with radial arms or lugs *b*, and the under half of said ring D is left open, whereby it will slip over and rest on the top of the ring C of pipe A, as shown in Fig. 1.

The globe or shade E is formed of glass, porcelain, or other suitable material, with wide open-mouthed bell-shaped base, and curved inward and outward to form a rounded shoulder at *c*, the purpose of this construction being to reflect the rays of light downward at different angles. The top or neck of shade E is formed with an inward annular projecting flange, E', which is adapted to rest on the projecting lugs *b*, and thereby supported and held in place above the gas-jet, as shown in Fig. 1.

In Fig. 6 the bell-shaped globe or shade E is shown supported by the inner flange, E', directly upon the upper surface of the ring C, formed by bending pipe A. This construction dispenses with the annular ring D, cheapens the construction, forms a reliable support for the globe E, and concentrates rays of heat from the gas-jet upon the bent ring C, thus heating the inflowing gas to a high degree, thereby increasing the volume of light by means of the expansion of the gas. The pipe A is bent to form the circle or ring C at right angles to its length, and the jet-tube end also at right angles; but the flame of the burner is designed to occupy a place nearly central beneath the ring C.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A gas-expander and shade-holder consisting of a tube composed of a vertical portion, a portion bent into circular form at right angles to the vertical portion, and a downwardly-extending portion, in combination with a concave annular plate fitting loosely around the top of said circular portion, and provided with horizontal projecting shade-supports, substantially as shown and specified.

2. A gas-expander and shade-holder consisting of a tube composed of a vertical portion, a portion bent into circular form at right angles to the vertical portion, the lower end of said vertical portion curved inward and upward and terminating in a gas-nipple in line with the center of said circle, and a down-

wardly-extending portion, the lower end of the downwardly-extending portion curved outward and provided with a coupling-ring, in combination with an outwardly-flaring bell-shaped reflector having a neck-flange projecting inward over the circular bent portion of said tube, substantially as shown and specified.

3. The combination of a circular expander, a bell-shaped reflector and concentrator having an inwardly-projecting neck-flange, and a

shade-suspending device consisting of an annular concave plate or ring having outwardly-projecting horizontal supporting-arms formed to fit the under face of said reflector neck-flange, substantially as shown and described.

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

JAMES RIGBY.

Witnesses:

VERNON M. DORSEY,

C. FRED. KELLER.