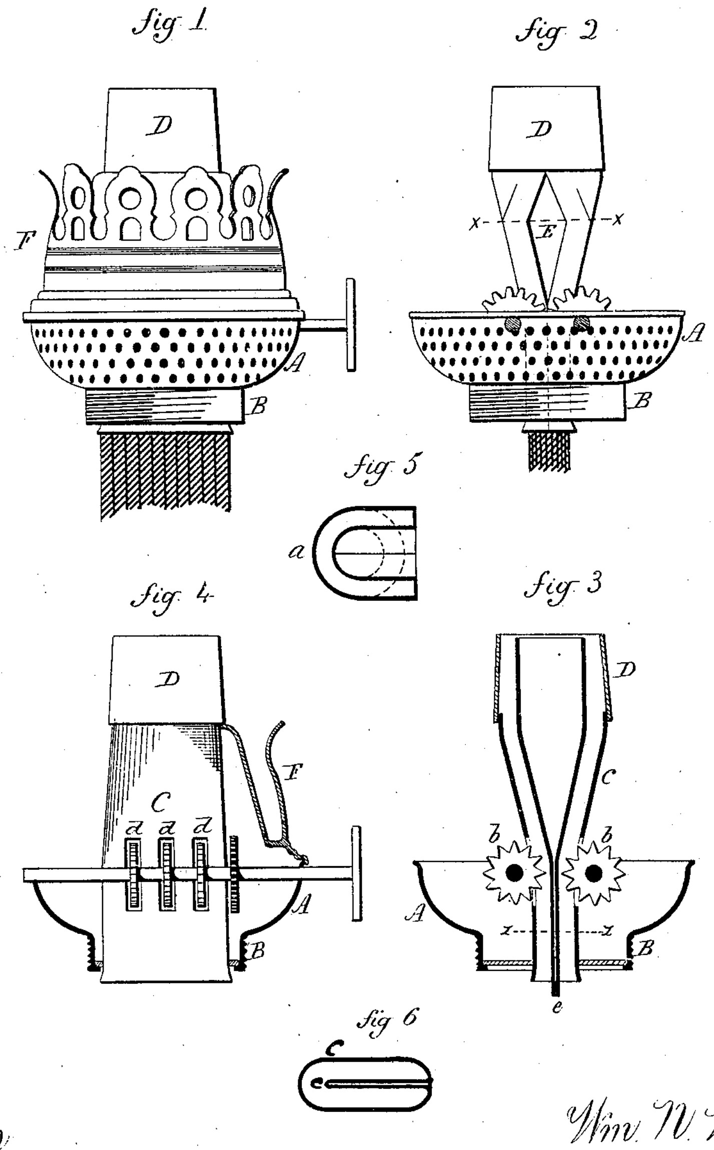
W. N. WEEDEN.

Lamp-Burner.

No. 207,576. Patented Aug. 27, 1878.



Witnesses

J. H. Shumway

H. A. Ketson.

Wm. N. Weeden

Inventor

By atty.

John E. Earle

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM N. WEEDEN, OF WATERBURY, CONN., ASSIGNOR TO THE BENEDICT & BURNHAM MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN LAMP-BURNERS.

Specification forming part of Letters Patent No. **207,576**, dated August 27, 1878; application filed November 9, 1877.

To all whom it may concern:

Be it known that I, WILLIAM N. WEEDEN, of Waterbury, in the county of New Haven and State of Connecticut, have invented a new Improvement in Lamp-Burners; and I do hereby declare the following, when taken in connection with the accompanying drawings and the letters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this specification, and represent, in—

Figure 1, side view; Fig. 2, side view turned one-fourth round and chimney-holder removed; Fig. 3, vertical section, in same position as Fig. 2; Fig. 4, sectional side view, position the same as in Fig. 1; Fig. 5, transverse section on line *x x;* Fig. 6, section of the wick-tube on line *z z*.

This invention relates to an improvement in that class of lamp-burners known as "Argand," and which take a flat wick, forcing it into a cylindrical form as it approaches the tip of the burner, the object being the construction of a cheap and durable burner; and the invention consists in the details of construction, as hereinafter described, and more particularly recited in the claim.

A is the base or body of the burner, constructed with screw-thread B to fit the lamp-collar. Centrally in this base the wick-tube C is arranged. This tube consists of the outer shell, *a*, which is formed from a single piece of sheet metal, and starting at the base is bent into a flat tube form, as indicated in Fig. 6, the thickness of the tube being sufficient to allow a doubled wick to pass freely therein. This shape is continued up to the wick-adjusters *b*, one on each side, which work through apertures cut in the tube, the two adjusters geared together, so that both sides work alike, in the usual manner. From this point upward the tube expands, coming into a U-shaped form on line *x x*, and as seen in Fig. 5. Thence it is drawn inward to a circular form at the base of the tip D. This tip D is a ring of metal of sufficient thickness to give the necessary rigidity to the wick-tube, and preferably seamless—that is, drawn up. It incloses the upper end of the shell C, as seen in Fig. 3, and enables the making of that shell of very much thinner metal than could be were it necessary to bring the shell up so as to form the tip for the base of the flame. Centrally within this shell C is a division, *e*, starting from the base, made from double sheet metal, and, running up substantially parallel with the outer shell, expands above the wick-adjuster to the line *x x*, thence contracted to form an inner tube within the tip D, as indicated in broken lines, Fig. 5. On one side this division extends through the outer shell, and so as to form an aperture, E, through the side of the shell, as seen in Fig. 2.

From the base up to the tip or the top of the opening E the two edges of the inner portion are united to the two edges of the outer portion.

The wick is folded and passed into the wick-tube, one fold each side of the division *e*, thence upward, and, drawn by the wick-adjusters, gradually works into the tubular form above the opening E and within the tip D. This opening E forms the inlet for the admission of air to the inner tube to support combustion, and form what is known as the "Argand burner."

In order to afford an easy introduction of the wick into the tube the lower end of the outer shell is expanded into funnel shape below the base, producing an opening considerably larger than the thickness of the wick or the tube above. Hence the end of the wick, which is usually more or less frayed, will easily pass into the wick-tube.

Onto the base and around the wick-tube the usual chimney-holder F is arranged, the inner shell extending up above the opening E, and perforated, as is the base, to allow the free passage of air therethrough into the opening E.

By this construction, the inner tube opening outward and the partition below are made from one piece of sheet metal, its peculiar shape giving it great strength, though made from very thin metal, and the whole burner is, by the peculiar construction of the wick-holding portion, made much lighter, and consequently cheaper, than the usual construction.

I claim—

In a burner constructed to receive a doubled flat wick to be gradually worked into tubular form, an outer shell forming the lower portion of the wick-tube, an inner tube extending from the base of the flame downward, and turning outward to form the air-inlet, with a tubular tip attached to the said outer shell, substantially as described.

WILLIAM N. WEEDEN.

Witnesses:
ROSWELL H. BUCK,
J. EDWARD JOHNSON.