R. WETHERILL.

Safety-Valve for Lamp-Burner.

No. 211,284. Patented Jan. 7, 1879.

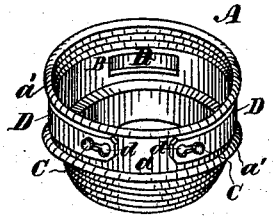

Fig. 1

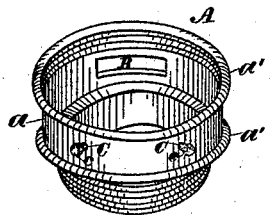

Fig. 2

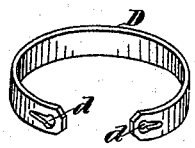

Fig. 3

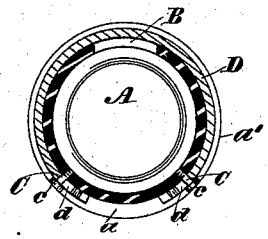

Fig. 4

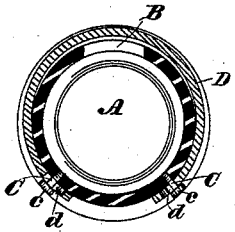

Fig. 5

WITNESSES:

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UNITED STATES PATENT OFFICE.

ROBERT WETHERILL, OF CHICAGO, ILLINOIS.

IMPROVEMENT IN SAFETY-VALVES FOR LAMP-BURNERS.

Specification forming part of Letters Patent No. **211,284**, dated January 7, 1879; application filed November 22, 1878.

To all whom it may concern:

Be it known that I, ROBERT WETHERILL, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Safety-Valves for Lamp-Burners; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification, in which—

Figure 1 is a perspective of my improvements. Fig. 2 is a perspective of the lamp-burner. Fig. 3 is a perspective of the valve. Fig. 4 is a horizontal section of my improvement, showing the position of the respective parts before explosion; and Fig. 5 is a similar view, showing the position of the parts while an explosion is taking place.

My invention has reference to that for which Letters Patent of the United States, dated December 25, 1877, No. 198,719, were granted to me; and my present improvement has for its object to provide such a construction of the valve as will insure its retention upon the burner, while permitting it to freely open by a sliding and expanding motion when occasion demands.

My invention accordingly consists in providing the burner or neck to which the valve is applied with two headed pins, the valve itself, which consists of a metallic spring-collar, having slots at either end to receive said pins and be thereby held in position.

Referring to the accompanying drawing, A represents a lamp burner or neck, formed with an annular channel, *a*, and ribs or guards *a' a'*. B is an opening in said burner or neck, for the escape of gases when an explosion or sudden expansion of said gases occurs. C C are pins, having heads *c c*, located on the side of the burner or neck opposite to the opening B. D is a valve, consisting of a metallic spring-collar adapted to fit in the annular channel *a*. Said collar has slotted openings *d d* at either end, to which enter the pins C C, the central portion of the collar thus fitting over and closing the opening B when the valve is applied to the burner or neck. The tendency of the valve being to contract, it will, under ordinary circumstances, hug the neck A tightly, as shown in Fig. 4, the heads of the pins C C being adjacent to the narrow parts of the slots *d d*, so that no lateral displacement or rotation of the valve can then occur. When, however, expansion of the gases sufficient to open the valve occurs, the collar D will be pressed away from the opening B, as shown in Fig. 5, the ends of the collar sliding on the pins C C. When the expansion subsides the collar will assume its normal position, tightly embracing the burner or neck A.

What I claim as my invention is—

The combination, with the neck or burner A, having a gas-escape, B, on one side, and studs *c c* on the opposite side, of the annular spring-valve D, having slots *d d* at each end fitting the studs *c c*, and allowing the spring to freely expand and contract, so as to open and close the escape B, as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of November, 1878.

ROBERT WETHERILL.

Witnesses:
O. M. STILES,
WATSON S. GRAY.