C. S. WESTLAND.
Lamp.

No. 206,061. Patented July 16, 1878.

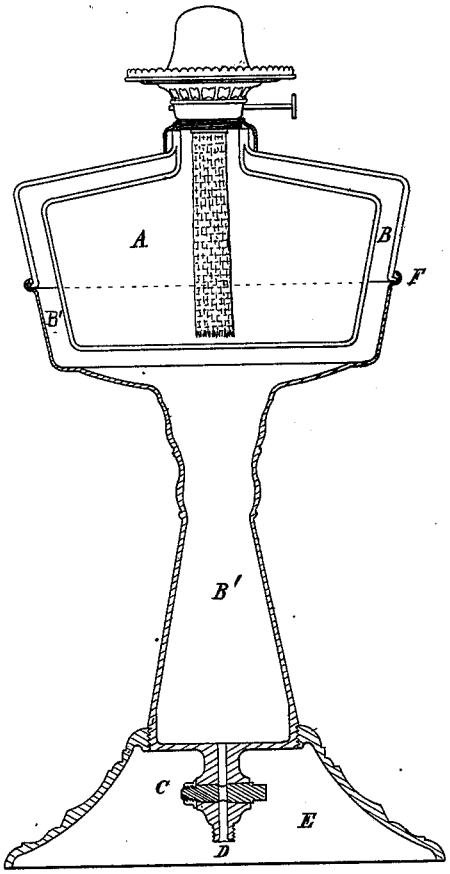


*Fig. 1.*

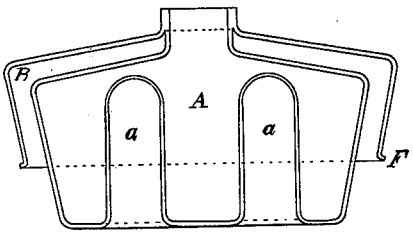


*Fig. 2.*

WITNESSES.
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# UNITED STATES PATENT OFFICE.

CHARLES S. WESTLAND, OF PROVIDENCE, RHODE ISLAND.

## IMPROVEMENT IN LAMPS.

Specification forming part of Letters Patent No. **206,061**, dated July 16, 1878; application filed June 25, 1878.

*To all whom it may concern:*

Be it known that I, CHARLES S. WESTLAND, of the city and county of Providence, in the State of Rhode Island, have invented certain new and useful Improvements in Lamps; and that the same are fully set forth in the following specification and drawings annexed thereto, and making part thereof.

The object of my invention is to furnish a lamp in which kerosene, naphtha, or any other explosive or inflammable fluids may be used without danger from fire in the event of an explosion, and to render ordinary lamps for burning the same equally safe under like circumstances.

My invention is based upon the well-known power of carbonic-acid gas to extinguish flames, which scientific fact I do not pretend to have discovered; but my invention relates solely to means of making the principle available for the prevention of conflagrations, as will be more fully hereinafter described; and consists in a lamp of any ordinary and suitable construction, provided with a closed receptacle formed of glass or some other fragile material and charged with carbonic-acid gas, said receptacle being so placed with relation to the burner as to be opened or broken and the confined gas permitted to escape in case the lamp should explode.

The accompanying drawing is an illustration of my invention, showing the most approved mode in which I have contemplated applying it.

Figure 1 is a vertical section of the complete lamp. Fig. 2 is a similar view of a reservoir, having gas-tubes extending through the oil-reservoir.

A is the oil-reservoir, and B B′ the gas-chamber. These parts A B are formed preferably of glass, blown into the desired form, and permanently joined at the neck, leaving an annular space between them, closed at the top. B′ is the hollow stem, which may be made of glass, or brass, or any other suitable material, and joined at F to the part B by cement or other hermetic connection, so that the parts B B′ shall constitute a chamber adapted to contain a quantity of carbonic-acid gas under pressure, and in such proximity to the burner that the gas would inevitably be liberated and fire thereby prevented should an explosion occur shattering the reservoir A. The standard B′ has at its base an inlet or gas-charging orifice, controlled by a stop-cock, C, and provided with a connecting-nipple, D, for attaching the supplying apparatus. E is the base supporting the lamp, and secured to or formed integral with the hollow standard.

By arranging the inlet and stop-cock at the side of the standard or base, the latter may be closed at the bottom and form a part of the gas-chamber.

The degree of the compression of the gas in the chamber must depend largely upon the strength of material employed and the space which may be devoted to its confinement.

If preferred, the reservoir A may be formed as in Fig. 2, with gas-tubes *a a* extending up through the oil to or nearly to the upper surface of the reservoir.

In applying my invention to existing lamps, I prefer to inclose the compressed gas in small closed vials, which may be dropped one by one into the oil-reservoir, and allowed to float therein. Instead of this, an annular hollow jacket, of glass, shaped to fit the upper part of the lamp and charged with gas, may be slipped over the oil-reservoir before the burner is applied. In either case the gas-receptacle is sure to be broken with the oil-reservoir in case of explosion. Thus it will be seen that this invention contemplates a remedy instantaneously available in the event of breakage of the lamp, and sudden danger from fire arising therefrom, and that this remedy is automatic, or is brought into action by the contingency which it guards against.

Having thus described my invention, I claim—

The combination, with a lamp for burning explosive or inflammable oils or fluids, of a closed receptacle containing carbonic-acid gas under pressure, so located with relation to the burner that in case of an explosion the compressed gas will be liberated, substantially as and for the purposes herein set forth.

CHARLES S. WESTLAND.

Witnesses:
DANIEL J. CORDERY,
JOHN G. PERRY.