S. RUST.

Lamp.

No. 4,428. Patented March 21, 1846.

Fig. 1.

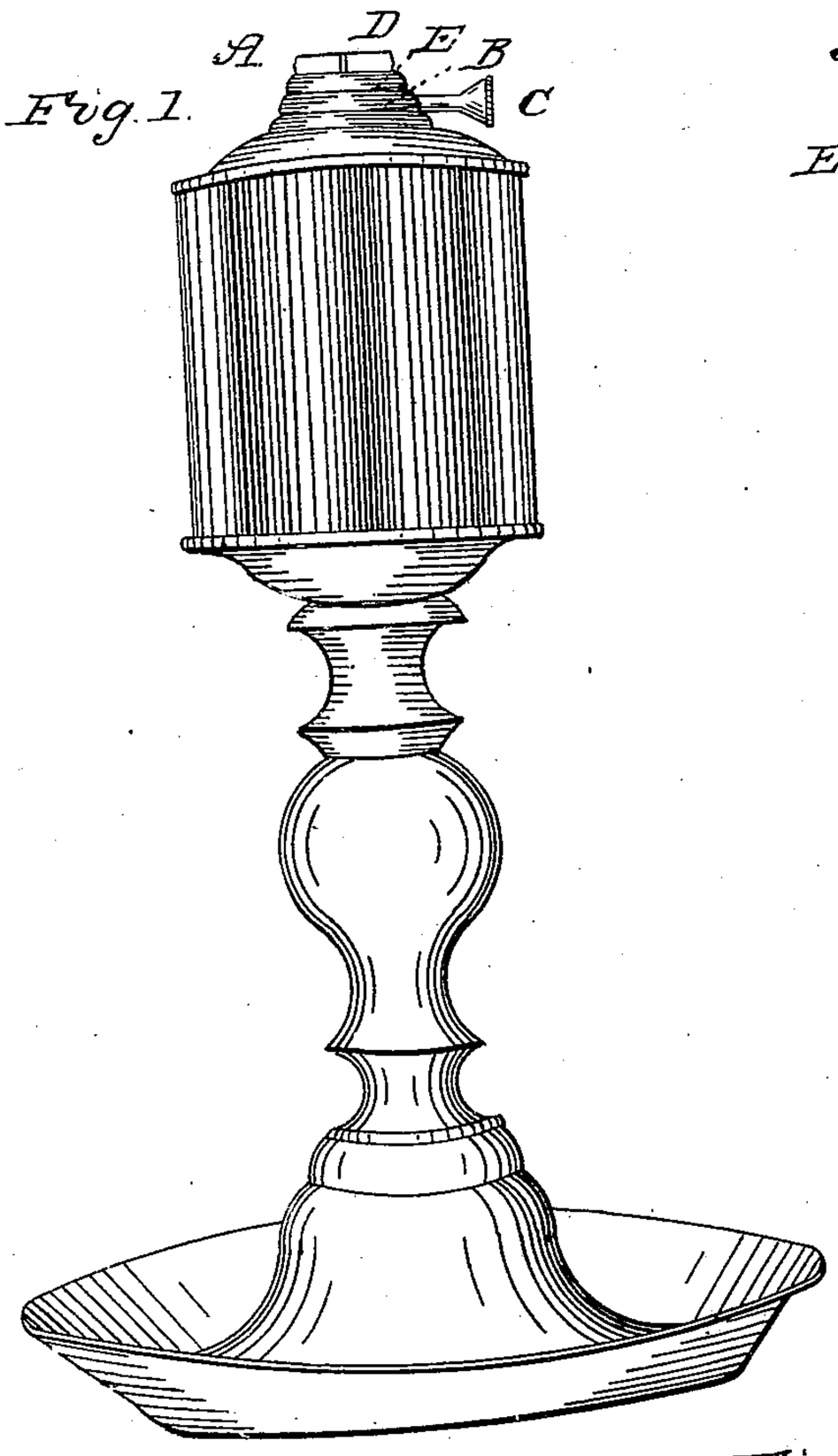


Fig. 2.

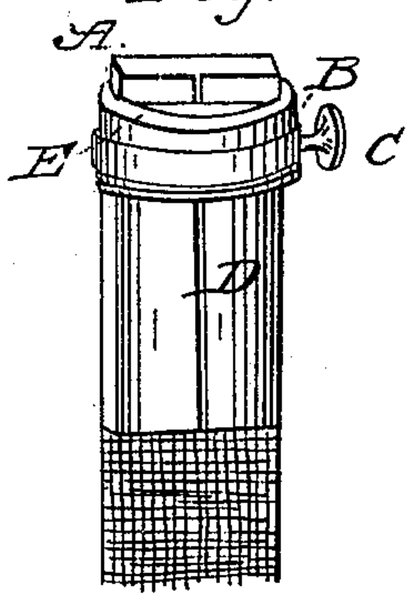


Fig. 3.

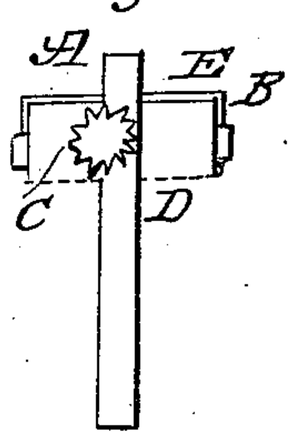


Fig. 4

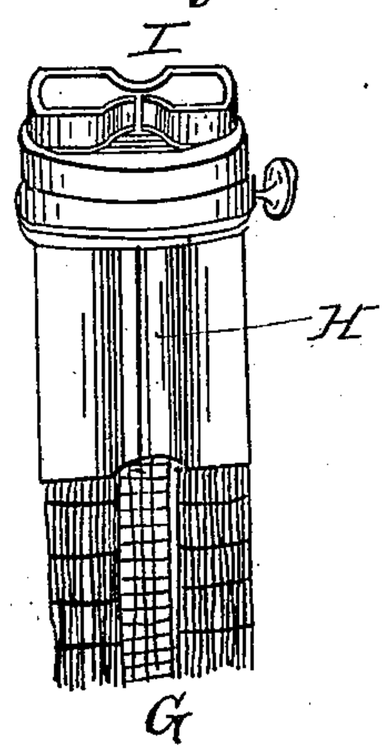


Fig. 5

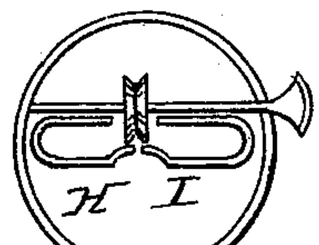


Fig. 9.

Fig. 6

Fig. 7

Fig. 8

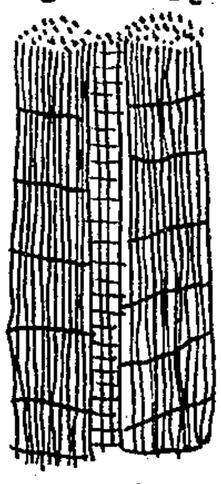


Fig. 10

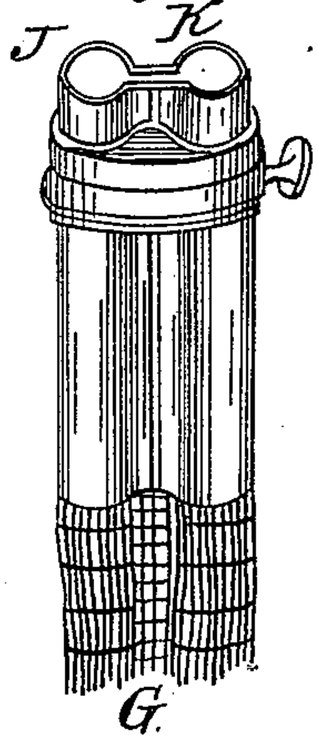


Fig. 11

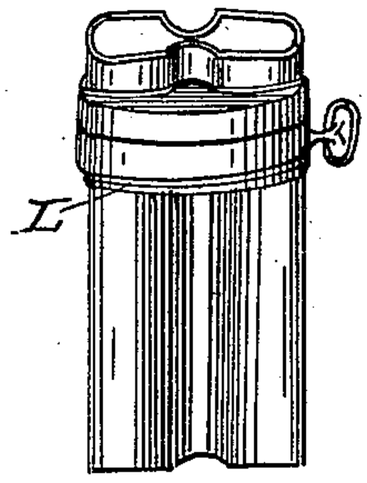
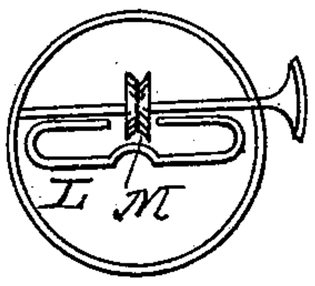


Fig. 12



UNITED STATES PATENT OFFICE.

SAMUEL RUST, OF NEW YORK, N. Y.

WICK-TUBE FOR LAMPS.

Specification of Letters Patent No. 4,428, dated March 21, 1846; Antedated January 29, 1846.

To all whom it may concern:

Be it known that I, SAMUEL RUST, of the city of New York, county and State of New York, have invented a new and useful Improvement in Lamps, which improvement is made on my lamps, with a spring and roller formerly patented by me, and also on other lamps, and that the following is a full and exact description thereof as invented or improved by me.

The tube I make of a flat form as A Figures 1, 2 and 3. The stopper is made in the usual form of my raised or capped stopper, formerly patented by me, as shown at B Figs. 1, 2, and 3 with the roller (which is a disk or wheel about $\frac{1}{4}$ of an inch wide, on the part which acts upon the wick) placed through, or into the stopper, below the top or cap, working into the side of the tube at the center, upon the middle part of the wick, as shown at C, Figs. 1, 2, and 3. Instead of a separate piece of metal, soldered on to the tube, and made to press against the wick and roller as a spring, for the purpose of receiving a thick or a thin wick, as formerly patented by me, I now bend and form the tube, so that the two side edges of the tin or material out of which it is made, will meet in the center, or middle part of the wide or flat side, of the tube lengthwise, and opposite to the roller, when placed in the stopper, so as to act as a spring to press the wick directly against the roller, as shown at D, Figs. 1, 2 and 3 (which is also instead of placing said edges at the corner of the tube as in former lamps, thereby losing their elasticity as a spring). A very thin recess is made in the stopper, at the top outside of the tube, on the side where these edges meet, as at E Figs. 1, 2, and 3 which recess allows the edges to recede, and help the spring, so that the roller presses the wick, in a narrow space in the center, against these edges, which forms a perfect spring from the edges, and takes in either a thick or a thin wick, between the roller, and the edges in this simple manner, the same as shown at D Figs. 1, 2 and 3, with the common woven wick in the tube, which is a plane flat tube, here first represented and described. But for my improved wick which is made thin in the center, or middle part, as shown at G Fig. 4 and G Fig. 6 and G Fig. 9, I bend these edges inward, so as to form a circular groove, on the outside of the tube lengthwise about $\frac{3}{8}$ of an inch wide more or less, shown at H Figs. 4 and 5, which groove forms a projection, also lengthwise of the tube, on the inside which meets the roller about half way in the tube. This projection serves to guide the wick, straight up and down, and prevents the roller from pressing the side of the wick, flat against the side of the tube, thereby obviating the evil of the obstruction of the circulation of the oil, in the common woven flat wick, as well as my improved wick, which evil is in other roller lamps. On the other side of the tube, above the top of the stopper, a corresponding groove is made, on the outside of the tube, opposite to this groove and also a corresponding projection on the inside, which two grooves and projections, forms a narrow neck or space in the tube, in the center or middle part as shown at I Figs. 4 and 5, or the said grooves and projections, may extend below the top of the stopper, the whole length of the tube, which tube being thin in the center, and thick on the edges, is peculiarly adapted for my improved wick, and which serves as a spring where these edges meet, in the same manner as the plane flat tube as first described by Figs. 1, 2, and 3. Or the projection, or the narrow neck or thin space on the inside of the tube, is made in the center or middle part of the wide or flat side of the tube, lengthwise (the same, excepting flat as described by Figs. 4 and 5) by forming the tube round on each edge, or narrow sides as shown at J Fig. 6 and connecting the round parts, by the narrow neck, or thin space in the center, which narrow neck or thin space, is made flat as shown at K Fig. 6 (in place of the circular grooves,) with the edges aforesaid, to press the wick against the roller, as a spring, the same as described by Figs. 1, 2, 3, 4 and 5 which is the same thing. These edges may likewise be made to meet in the center or middle part of the same side of the tube, as described by Figs. 1, 2, 3, 4, 5 and 6, but about a $\frac{1}{4}$ or $\frac{3}{8}$ of an inch on one side, from being opposite to the roller as represented at L Figs. 7 and 8 and one side of these edges, only bent inward, opposite to the roller as represented at M Figs. 7 and 8 so as to form a groove on the outside of the tube lengthwise, and a projection on the inside to meet the roller, so that the roller, presses the wick, against this projection, and causes the one edge

only to spring, to take in the wick, while the other will remain stationary, which is the same thing, as has been fully described by said Figs. 1, 2, 3, 4, 5, and 6.

The top of the lamp may be made all in one piece (as though the stopper was brazed or soldered in) with a feeder to put in the oil, made at the top on one side, and the tube, roller and recess made and combined in the top of the lamp, the same as described in the stopper by Figs. 1, 2, 3, 4, 5, 6, 7 and 8 which is the same thing.

What I claim as new and useful in the lamp as above described and desire to secure by Letters Patent, is—

The so bending or forming of the tube, and inserting it into the stopper or lamp, as to place the edges of the tin, or material out of which the tube is made as aforesaid, on the center or middle part of the side, and lengthwise of the tube opposite to the roller, so as to form a spring of the edges, or either of them as described, for the purpose of pressing the wick, against the roller with a gentle pressure and also, I claim the projections or narrow neck, or thin space, on the inside and lengthwise of the tube, in the center or middle part of the wide or flat side as described (to be used either with the said edges which form the spring as aforesaid, or to be used without) combined with the roller in such way and manner and for the purposes as above set forth or in any other way that is substantially the same.

Witness my hand this fourteenth day of October 1845, A. D.

SAMUEL RUST.

In presence of—

SARAH ANN RUST,

C. J. DEWITT.