(No Model.)

R. Z. LIDDLE.

WICK TUBE FOR OIL STOVES.

No. 480,268. Patented Aug. 9, 1892.

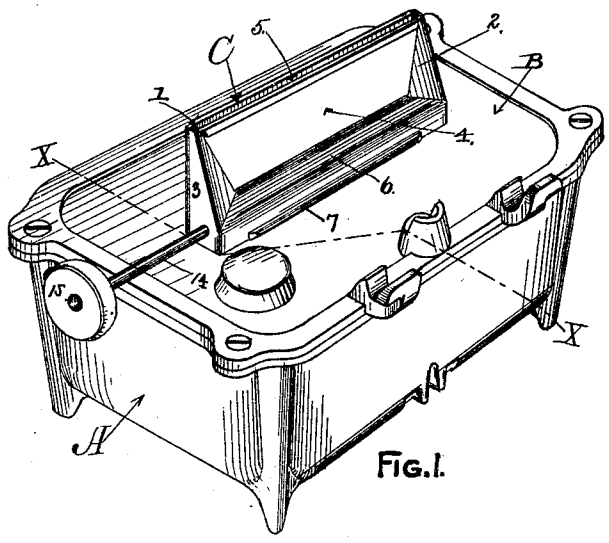

FIG. 1.

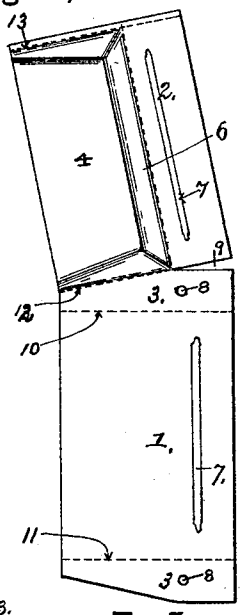

FIG. 5.

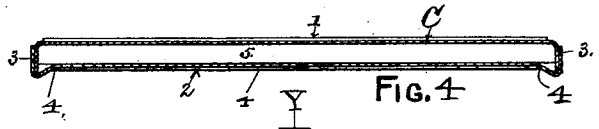

FIG. 4.

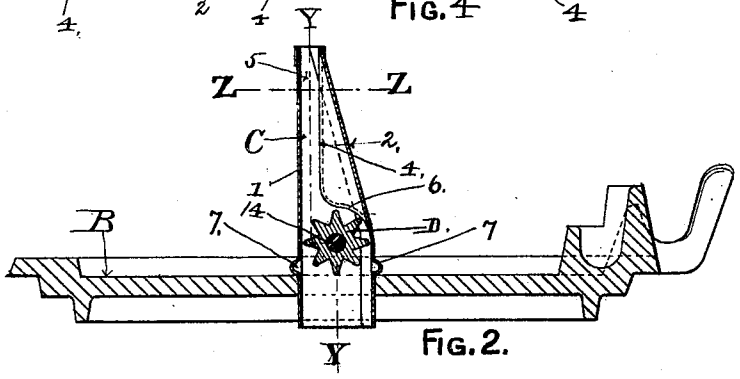

FIG. 2.

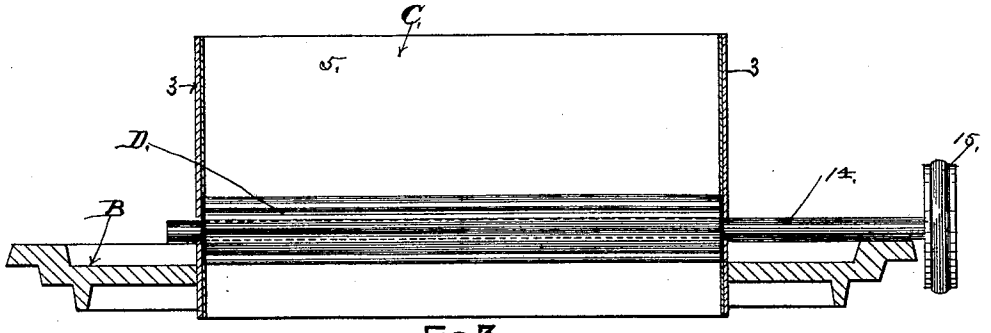

FIG. 3.

WITNESSES

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ROBERT Z. LIDDLE, OF ALBANY, NEW YORK.

WICK-TUBE FOR OIL-STOVES.

SPECIFICATION forming part of Letters Patent No. 480,268, dated August 9, 1892.

Application filed April 22, 1892. Serial No. 430,195. (No model.)

To all whom it may concern:

Be it known that I, ROBERT Z. LIDDLE, of the city and county of Albany, in the State of New York, have invented new and useful Improvements in Wick-Tubes for Oil-Stoves, of which the following is a specification.

The object of my invention is to form wick-tubes for oil-stoves in such manner that they will contain no chambers for receiving the explosive and combustible gases generated during the process of combustion or the residuum of the material from which said combustion emanates, the wick-raiser being arranged within the body of the tube and having an open communication with the oil-chamber of the stove and the portion of said tube which incloses the wick above the wick-raiser being formed to closely confine the same, while leaving sufficient freedom for said wick to allow a free upward flow of the oil to feed the flame. This object I attain by the means illustrated in the accompanying drawings, which are herein referred to and form part of this specification.

In the drawings, Figure 1 is a perspective view of an oil-stove provided with my improvements. Fig. 2 is an enlarged transverse section of top of said stove and its wick-tube, said section being taken at the irregular line X X on Fig. 1. Fig. 3 is a longitudinal section of said top and wick-tube, taken at the irregular line Y Y on Fig. 2. Fig. 4 is a horizontal section of said wick-tube at the line Z Z on Fig. 2; and Fig. 5 is a plan view, on a reduced scale, of a blank for forming my wick-tube from a single piece of metal.

As represented in the drawings, A designates the oil-reservoir of the stove, and B the top plate of the same, neither of which form a part of this invention, but both of which will be found fully described and set forth in my application, Serial No. 384,263, for a patent, filed in the Patent Office March 9, 1891.

C designates my improved wick-tube, which includes a front 1, back 2, and ends 3, which may be formed of two pieces, as shown in Figs. 3 and 4, interlocked at opposite ends, or it may be formed of a single piece made in the form shown in Fig. 5 and interlocked at one end. The ends of said wick-tube have an approximate trapezoidal form, whose lower portion is formed of parallel vertical lines and its upper portion formed by a vertical line, which preferably is a continuation of the vertical line at the front part of the lower portion of said end, and an inclined line, which joins to the opposite vertical line at the lower portion of said end, whereby an obtuse angle is formed at the rearmost side of the end of said tube. A passage 5, whose inclosing walls will be practically parallel, is formed to contain the wick alone, and a passage 6, having an increased capacity to contain both the wick and wick-raiser D, is formed in said tube to have a free communication with the oil-reservoir A, both of said passages being formed in the body of said wick-tube by means of the depression 4. When formed of two pieces, as shown in Fig. 4, the ends 3 are preferably formed on the back 2, and the front 1 is provided with overlapping parts, the two parts being secured together by solder or other suitable means. The tube C may be secured to the top plate B by soldering or other suitable means whereby a gas-tight joint can be made. When the wick-tube C is made of a single piece of sheet metal similar to the blank shown in Fig. 5, the indented portion 4, journal-holes 8 for the pivots of the wick-raiser D, and a notch 9 should be made therein before said blank is bent to form said wick-tube. Preferably slightly-indented lines 10, 11, 12, and 13 are made in said blank at the points where the bends are to be made to form said wick-tube, the bend at the line 13 being made to form a slight overlap to engage over the edge of the front 1.

The wick-raiser D, which is of an old and well-known form, is journaled in the ends 3 of the wick-tube, and its shaft 14 is provided with a head 15, whereby said wick-raiser can be rotated when occasion requires. It will readily be seen that by this construction, while I have provided ample space for an upflow of oil through the wick while it is in the passage 5, there is no vacant space wherein gases can accumulate and that a free opening is formed at the lower end of the wick-tube from the lower side of the wick-raiser D into the oil-reservoir A to form an unobstructed passage from said wick-raiser into said oil-reservoir,

whereby any incrustation or other débris which may be formed on the wick or deposited on the wick-raiser during the manipulations of the latter will be discharged therefrom and deposited in said oil-reservoir.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A wick-tube having one of its principal sides formed by a vertical plane, the opposite side having at its lower part a short vertical plane followed by a depressed portion which forms a contracted passage for containing a wick, the lower part of said depression containing a wick-raiser and the extremities of the last-named side being bent at an obtuse angle to said vertical plane, and ends having an approximated trapezoidal form corresponding to the extremities of said sides, as herein specified.

2. A wick-tube comprising a large open passage below the wick-raiser and a contracted passage above said wick-raiser, one side of both of said passages being formed on the same vertical plane and the other side of both of said passages being parallel to said plane, but at different distances therefrom, the upper passage being adapted to easily inclose the wick and the lower passage forming an open communication from the lower side of the wick-raiser into the oil-reservoir, the ends of said tube having an approximated trapezoidal form and the back of said tube being impressed to form the contracted upper passage for the wick, as and for the purpose specified.

3. A wick-tube having a large open passage of uniform size from the lower side of the wick-raiser to the lower end of said tube and a contracted passage of uniform size from the upper side of the wick-raiser to the upper end of said tube, one side of both of said passages being formed on the same vertical plane, as and for the purpose specified.

4. A wick-tube composed of one or more pieces and having an upper passage of uniform size adapted to inclose the wick and a lower passage of uniform size, but of greater area than said upper passage, one side of both of said passages being formed on the same vertical plane, in combination with a revoluble wick-raiser arranged at the junction of said passages and fitted to discharge the débris from the wick into the oil-reservoir, as and for the purpose herein specified.

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