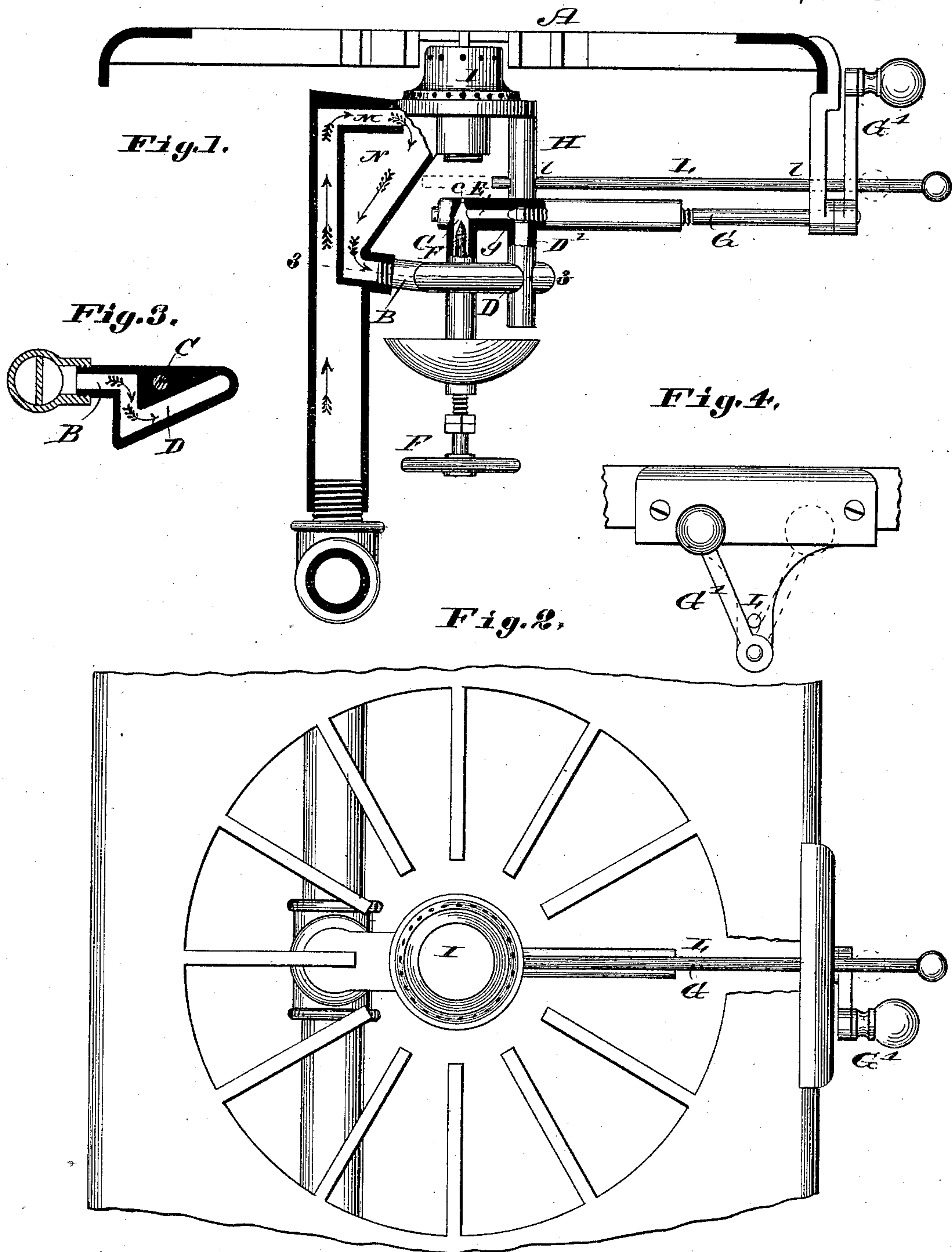


(No Model.)

E. P. CORBY.
VAPOR BURNER.

No. 286,267.

Patented Oct. 9, 1883.



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UNITED STATES PATENT OFFICE.

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VAPOR-BURNER.

SPECIFICATION forming part of Letters Patent No. 286,267, dated October 9, 1883.

Application filed December 28, 1882. (No model.)

To all whom it may concern:

Be it known that I, EDWARD P. CORBY, of St. Louis, Missouri, have made a new and useful Improvement in Vapor-Burners, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a vertical section of the improved burner; Fig. 2, a plan; Fig. 3, a section on the line 3 3 of Fig. 1; and Fig. 4, a front elevation, showing the valve-crank.

The same letters of reference denote the same parts.

The present invention relates to the means for more effectually directing the blaze upon the retort in priming the burner.

A represents a vapor-burner in which the present improvement is embodied. The vapor flows into the passage B; thence, in place of entering the upright passage C immediately, the vapor passes into a circuitous passage, D, which winds around the passage C, as shown in Fig. 3, and then passes upward at D', and finally leads into the horizontal passage E, which in turn leads into the passage C. After reaching the passage C by the route described, the vapor escapes to the burner in the usual manner.

In place of regulating the flow of the vapor by means of the customary needle-valve, F, it is controlled by a valve, G, which works in the passage E, seating at a point, g, therein between the passages D' C. The needle-valve F is designed for cleaning purposes. A gummy deposit gradually forms in the orifice c, through which the vapor escapes from the tube C, and to remove this deposit the needle-valve F is occasionally used; but as the frequent use of the needle-valve causes it to wear to such an extent as to be an unreliable means for stopping the flow of the vapor, the blunter valve G, which, from its shape, is more durable, is used in connection with the needle-valve. If desired, both of the valves can be simultaneously used, as either valve can be operated without interfering with the action of the other valve. The passage D is preferably in one piece of metal with the passage C, for the purpose of keeping the passage C as warm as possible. To further heat the parts immediately connected with the delivery of the vapor, a piece of metal, H, extends from the burner I down to the tube E. By means of this piece

H the heat of the burner is conducted to the tube E, and thence to the tube C. The valve G is operated by means of the crank G', by turning which the valve is suitably moved in the tube E.

I have ascertained that in the ordinary burner the blaze of the oil burned at and about the orifice c for the purpose of initiating the vaporizing of the oil is not effectively directed. To improve a vapor-burner in this respect, I employ means for spreading the blaze and deflecting it more against the retort of the burner. A convenient means for this is the rod L, which is held in suitable bearings, ll, and adapted to be moved, when desired, over the orifice c, as indicated by the dotted lines in Fig. 1, in which position it operates to spread the flame, preventing the flame and heat from passing directly upward to the burner, and directing it against that part of the construction wherein the oil is received and vaporized. As soon as the burner has become sufficiently heated and is self-operative, the rod L is withdrawn, as shown in the full lines in Figs. 1, 2, from above the orifice c, allowing the vapor to escape directly upward to the burner I. The rod L, at its outer end, may serve, as indicated in Fig. 4, as a stop to limit the movement of the crank G'.

The present improvement is preferably associated with a retort, M, and vapor-reservoir N, such as shown in Fig. 1, and described more particularly in a pending application, No. 80,350, for Letters Patent. The deflector L is especially useful in combination with this form of retort and with the vapor-reservoir N.

I claim—

1. In a vapor-burner having a retort, M, and an oil-reservoir, N, directly overhanging the burner, passage C, having the orifice c, the passage B, the surrounding and vertical passages D, D', and E, and valves F and G, regulating the supply of gas and size of flame, substantially as described.

2. In a vapor-burner having a burner, I, the flame-orifice c, the oil-supply passages D, D', E, and B, the overhanging reservoir N and retort M, and the deflector L, operating to deflect the flame at will on the under surface of N, substantially as described.

EDWARD P. CORBY.

Witnesses:

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