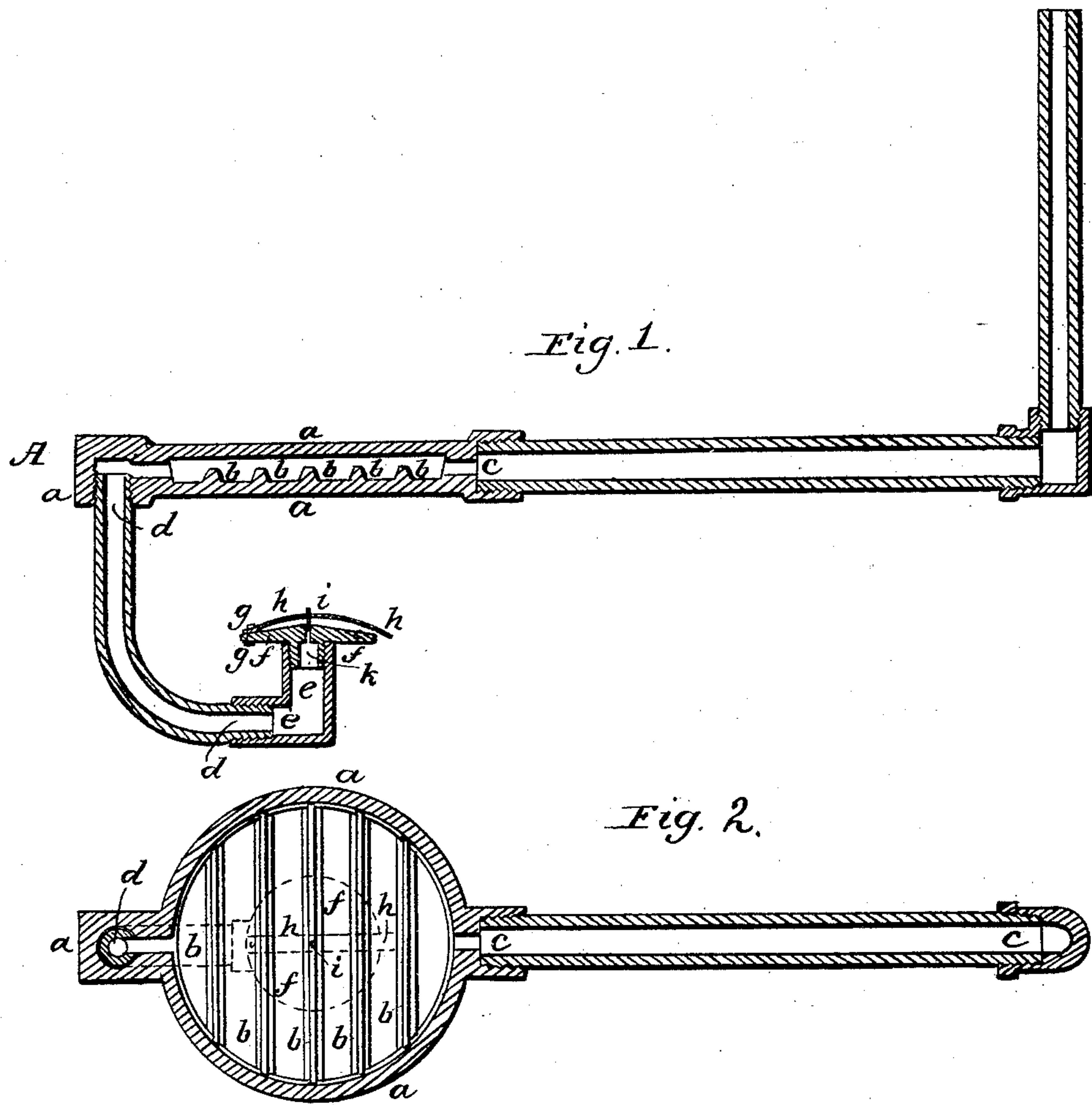


M. E. HANSON.

Gas Generator.

No. 57,502.

Patented Aug. 28, 1866.



Witnesses:
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UNITED STATES PATENT OFFICE.

MARK E. HANSON, OF NEWPORT, MAINE.

APPARATUS FOR GENERATING AND BURNING GAS FROM PETROLEUM, NAPHTHA, &c.

Specification forming part of Letters Patent No. 57,502, dated August 28, 1866.

To all whom it may concern:

Be it known that I, MARK E. HANSON, of Newport, county of Penobscot, and State of Maine, have invented certain new and useful Improvements in Apparatus for Generating Gas from Naphtha and other like Substances; and that the following description, taken in connection with the accompanying plate of drawings, hereinafter referred to, forms a full and exact specification of the same, wherein I have set forth the nature and principles of my said improvements, by which my invention may be distinguished from all others of a similar class, together with such parts as I claim and desire to have secured to me by Letters Patent.

The methods heretofore employed in cooking apparatus for generating gas from naphtha and other like substances have been found to be objectionable on account of the imperfect combustion or evaporation of the material employed, thereby causing a sediment to collect, which eventually clogs and obstructs the passage of the gas through the eduction-tube connected with the apparatus. Moreover, in apparatus heretofore employed only refined oil could be used, which, on account of its cost, together with the waste occasioned by its incomplete consumption, caused the generating of gas from naphtha, &c., by the methods heretofore used to be expensive, as well as objectionable in other respects, that will be more fully explained hereinafter.

The present invention has for its objects the adaptation or construction of an apparatus for the more perfect consumption or evaporation of the naphtha or other substance used in generating gas for cooking purposes, allowing the use of a cruder and cheaper kind of oil than has heretofore been employed, and the more effectually closing the aperture of the burner, so as to prevent any effluvia arising therefrom.

It consists in so arranging a series of devices that the naphtha or other substance used, as it passes through a reservoir or chamber placed over a burner, is detained or retarded therein until its sediment is entirely consumed, thereby preventing any clogging or obstructing of the eduction-pipe, and allowing a cruder and cheaper kind of oil to be employed, thus reducing the cost of material

and generating from the same quality and quantity of substance a greater amount of gas than has heretofore been possible by any other method used.

I will now proceed to describe in detail the arrangement and operation of my improved gas-generator.

The accompanying plate of drawings represents my improvements.

Figure 1 is a central vertical longitudinal section of my improved gas-generator; and Fig. 2 is a horizontal section of the same, taken through the plane of the line A B, Fig. 1.

a a a in the drawings represent a reservoir or chamber, to the bottom of which are formed, at equal intervals from each other, horizontal bars *b b*. At one side of and entering into the reservoir or chamber *a a a* is attached an induction-tube, *c c*. At the bottom of the opposite end of the reservoir *a a a* an eduction-tube, *d d*, curved at the bottom, is made to enter. To the lower end of this eduction-tube *d d* an elbow-joint, *e e*, is attached in such a manner as to bring it under the center of the reservoir *a a a*. A cap or burner, *f f*, is made to screw into the top of the elbow-joint *e e*. Turning on a pivot, *g g*, attached to one side of the cap *f f*, is a bent spring, *h h*, which extends over the cap *f f* and has formed in its center a pin or stop, *i*, which is made so as to fit in and close, or to be removed from and open, an aperture, *k*, formed in the center of the cap *f f*.

From the foregoing description, reference being had to the drawings, it will be seen that the naphtha or other material used passes from the induction-tube *c c* into the reservoir *a a a*, where it is checked or retarded in its progress by means of the horizontal bars *b b*, over which it is obliged to flow before reaching the exit or eduction tube *d d*, thereby allowing sufficient time for the sediment that may collect to settle and be consumed by the heat arising from the consumption of the gas passing through the burner or cap *f f*, which is attached to the eduction-tube *c c*, so as to come under the reservoir, in the manner hereinabove described.

It will also be observed that the disagreeable odor so objectionable in apparatus heretofore used, and which is occasioned by the

ineffectual manner which has hitherto been adopted for closing the aperture through which the gas escapes, is entirely obviated by means of a pin or stop, *i*, which is made to fit in an aperture, *k*, in the center of the burner or cap *f f*, and is pressed and held firmly therein by the bent spring *h h*, to which the pin *i* is attached.

Having thus described my improvements, I shall state my claim as follows:

What I claim as my invention, and desire to have secured to me by Letters Patent, is—

The hereinbefore-described arrangement of a gas-generator and burner, consisting of the generator *a a*, with the ribs *b*, the eduction-pipe *d*, perforated cap *f*, together with the hinged spring *h* and pin *i*, the said several parts being constructed and the whole combined for use substantially as and for the purpose set forth.

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