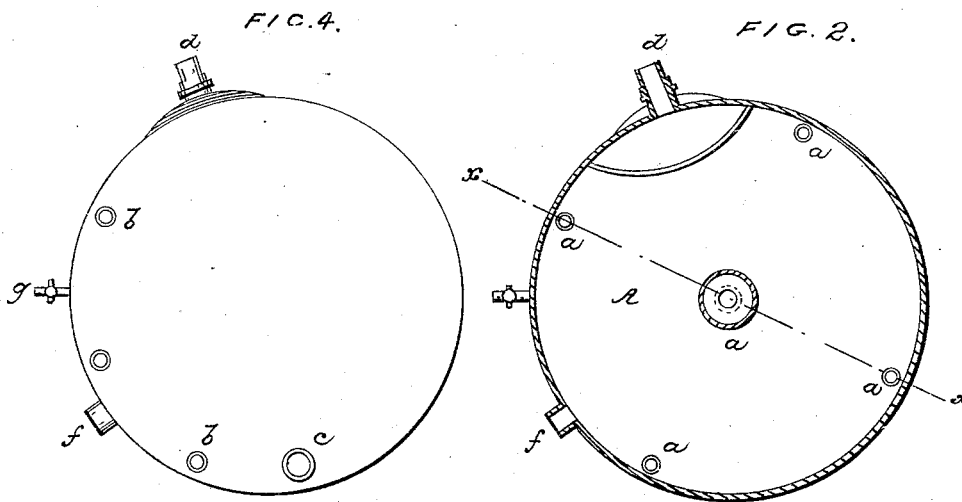
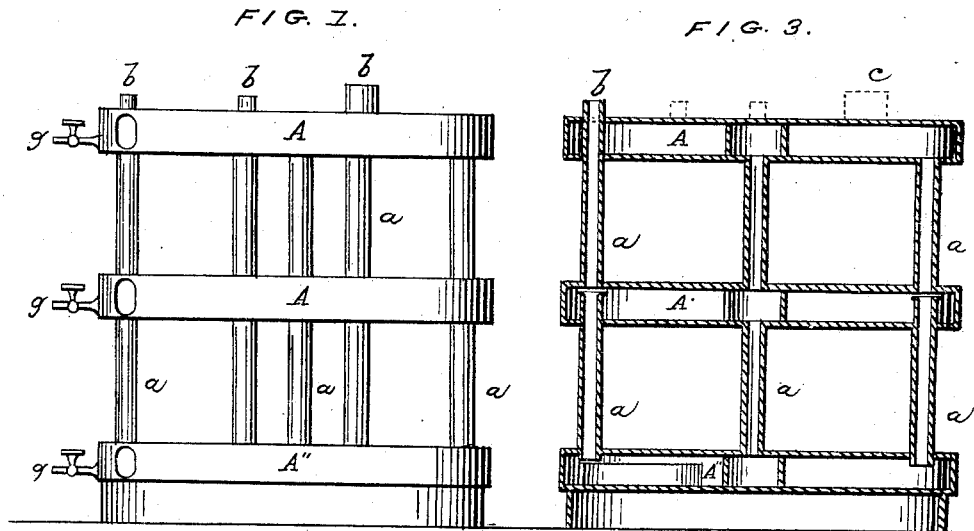


M. J. A. MILLE.
Carbonizing Air.

No. 49,596.

Patented Aug. 22, 1865.



WITNESSES:

Wm. J. Mille
Thos. Busch

INVENTOR.

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att'y.

UNITED STATES PATENT OFFICE.

MARIN JOSEPH ALPHONSE MILLE, OF PARIS, FRANCE, ASSIGNOR TO
H. A. G. DU VERGIER, OF SAME PLACE.

IMPROVED APPARATUS FOR CARBURETING AIR.

Specification forming part of Letters Patent No. 49,596, dated August 22, 1865.

To all whom it may concern:

Be it known that I, MARIN JOSEPH ALPHONSE MILLE, of Paris, in the Empire of France, have invented a new and Improved Apparatus for Carbonizing Air; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of this invention. Fig. 2 is a horizontal section of the same. Fig. 3 is a vertical central section of the same, the line *xx*, Fig. 2, indicating the plane of section. Fig. 4 is a plan or top view of the same.

Similar letters of reference indicate like parts.

This invention consists in an apparatus for carbonizing air, composed of a series of drums placed one above the other and communicating with each other by means of a series of pipes, in combination with a suitable air-supply pipe and with a discharge-pipe in such a manner that when the drums are filled with sponge, felt, or other absorbent material saturated with benzine or other hydrocarbon liquid, or a combination of hydrocarbon and other volatile liquids, and atmospheric air is admitted or forced in through the supply-pipe, said air in passing through the apparatus is saturated with hydrocarbon vapors, and on being drawn from the apparatus through the discharge-pipe it is fit for illuminating and heating purposes.

A A' A'' represent a series of hollow drums of cylindrical or other desirable form, made of sheet metal or any other suitable material. These drums are arranged one above the other, as shown in Figs. 1 and 3 of the drawings, and

they communicate with each other by means of vertical pipes *a*, as shown in Fig. 3. Said drums are intended to be filled with sponge, felt, or other absorbent material, which is saturated with benzine, naphtha, camphene, or other volatile hydrocarbon liquid, or a compound may be used of benzine, camphor, and ether. This liquid or compound is introduced through spouts or pipes *b* in the upper drum, and said drum is also provided with an air-supply pipe, *c*, through which air is forced into the apparatus by a force-pump, fan-blower, or any other suitable mechanical device. This air in passing through the material saturated with volatile hydrocarbon liquid takes up a quantity of hydrocarbon vapor, and on leaving the apparatus through the discharge-pipe *d* said air is fit to be used for illuminating or heating purposes. Each of the drums is provided with a large opening, *f*, in its circumference, through which the interior of the same may be observed. Said openings may be covered by panes of glass, and also closed by screw-caps, if desired. Small cocks *g* serve to draw off the surplus liquid from the drums, or that portion of the liquid which is not absorbed by the sponge or other material in their interior.

I claim as new and desire to secure by Letters Patent—

An apparatus for carbonizing air, composed of a series of drums, A A' A'', which are filled with some absorbent material and made to communicate with each other by suitable pipes, in combination with an air-supply and gas-discharge pipe, constructed and operating substantially as and for the purpose described.

MILLE.

Witnesses:

E. SHERMAN GOULD,
DUHAM.