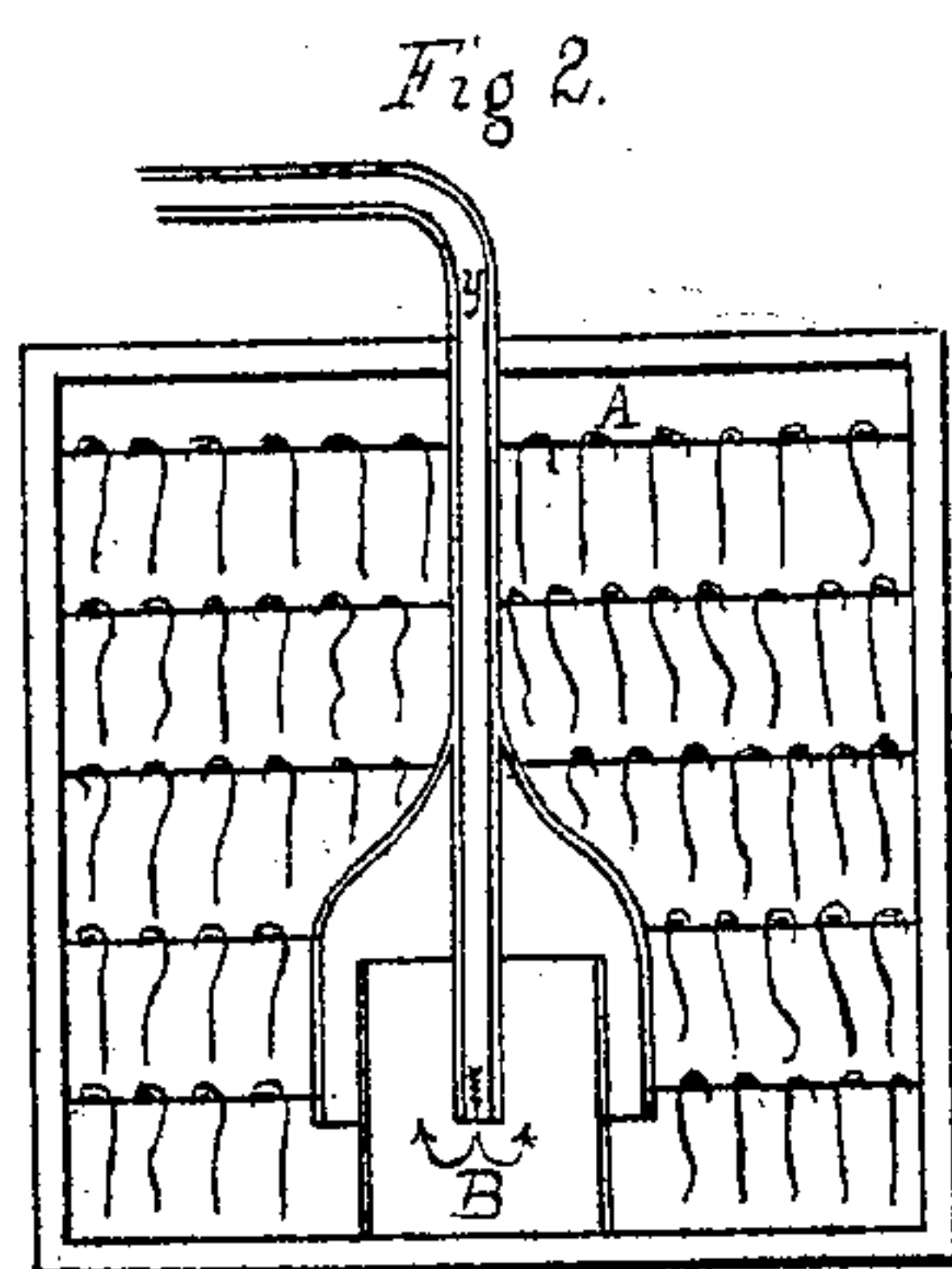
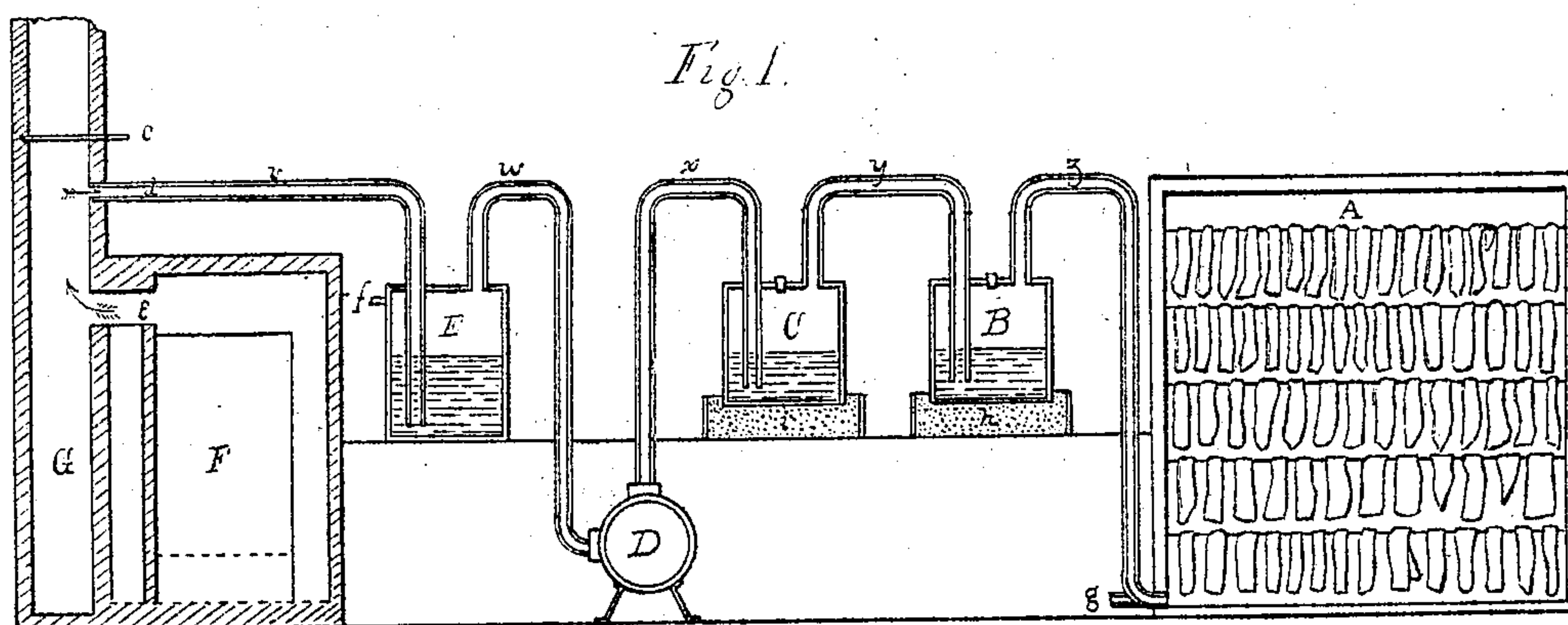


A. P. MEYLERT.

Process for the Manufacture of White Lead.

No. 136,446.

Patented March 4, 1873.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

ASA P. MEYLERT, OF NEW BRITAIN, CONNECTICUT.

## IMPROVEMENT IN PROCESSES FOR THE MANUFACTURE OF WHITE LEAD.

Specification forming part of Letters Patent No. 136,446, dated March 4, 1873.

*To all whom it may concern:*

Be it known that I, ASA P. MEYLERT, of New Britain, in the State of Connecticut, have invented a new and Improved Method for the Manufacture of White Lead; and I declare the following to be a full, clear, and exact description thereof.

The nature of my invention consists in an economical method of vaporizing and using the acetic acid required in corroding lead.

It has been customary in the manufacture of white lead by means of carbonic-acid gas introduced from without to vaporize the acetic acid by the application of heat, said heat being applied for that purpose either directly to the retort, still, or vessel containing the acetic acid, or being applied to the acid itself within the vessel by means of steam-coils passing through said acid.

My improvement consists in passing the carbonic-acid gas directly through the acetic-acid liquor, or in so commingling the carbonic-acid gas with said acetic-acid liquor as to compel a partial vaporization of said acid liquor while so intermingled with the carbonic-acid gas.

By this means important advantages are gained over former methods, as, first, the saving of the cost of apparatus, of fuel, and of attendance; second, the obtaining of a regular and uniform supply of acetic acid; third, the economy of use, by reason of the small quantity of acid actually consumed, the excessive quantity which is always vaporized by the direct action of heat being not only a direct expense in itself, but causing a great waste of lead, and the white lead produced thereby being inferior in quality.

All these objections are overcome by my method of vaporizing the acetic acid.

The method of manufacturing white lead by means of my apparatus is as follows: Thin strips or pieces of lead of any convenient size are placed in a convenient chamber or house. At any convenient distance from this chamber, and connected thereto by a pipe or pipes, or within the chamber itself, is placed a vessel, reservoir, or receptacle of any suitable form or shape, containing acetic acid of any suitable strength. Carbonic-acid gas, either pure or mixed with oxygen, or with common air, is forced through a suitable pipe or pipes into

said receptacle containing acetic acid, said gas being passed through or over said acid, and then passed from said receptacle into the room containing metallic lead for corrosion. Steam is likewise introduced at any convenient point and mingled with the gas and vapor.

The accompanying drawing, making a part of this specification, represents a sectional view of my apparatus, in which A is a corroding-room containing metallic lead; B, an acid reservoir or receptacle containing acetic acid; *y*, a pipe, conveying carbonic-acid gas; C, a purifying-reservoir, containing materials for purifying carbonic-acid gas; D, an exhaust force-pump or blower; E, a tank, containing water for gas-purification. F, a steam-boiler; G, a chimney; *h*, a sand-bath; *i*, a sand-pedestal; *v*, *w*, *x*, *y*, and *z*, pipes for conveying gases and vapors; *c*, a gate or slide in chimney; *d*, opening of gas-pipe in chimney; *e*, flue from boiler; *f*, water-pipe to supply tank E; *g*, steam-pipe opening to pipe *z* and to room A.

Any other suitable acid may be used in the place of acetic acid, and it may be applied to the manufacture of any other carbonates to which it may be adapted.

The carbonic-acid gas, as illustrated in the accompanying diagram, may be obtained from the combustion of fuel, or it may be obtained by the decomposition of any of the carbonates, or from any other source.

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

1. The method of vaporizing acetic acid or its equivalent by passing carbonic-acid gas in contact with the same, substantially as above described.

2. The combination of the pipe *y*, conveying carbonic-acid gas into, and terminating in, the receptacle B, the acid-receptacle B, the corroding-chamber A, and their connections, substantially as and for the purpose set forth.

3. The combination of the purifier C, the acetic-acid receptacle B, the corroding-chamber A, and their connections, substantially as and for the purpose set forth.

4. The combination of the pump or blower D, the purifier C, the acid-receptacle B, the corroding-chamber A, and their connections, substantially as and for the purpose set forth.



5. The combination of the furnace for generating the carbonic-acid gas, the washer E, the acid-receptacle B, the corroding-chamber A, and their connections, substantially as and for the purpose set forth.

6. The combination of the furnace for generating the carbonic-acid gas, the washer E, the pump or blower D, the acid-receptacle B, the corroding-chamber A, and their connections, all arranged substantially as and for the purpose set forth.

7. The combination of the furnace for generating the carbonic-acid gas, the washer E, the pump or blower D, the purifier C, the acid-receptacle B, the corroding-chamber A, and their connections, arranged substantially as and for the purpose set forth.

A. P. MEYLERT.

Witnesses:

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