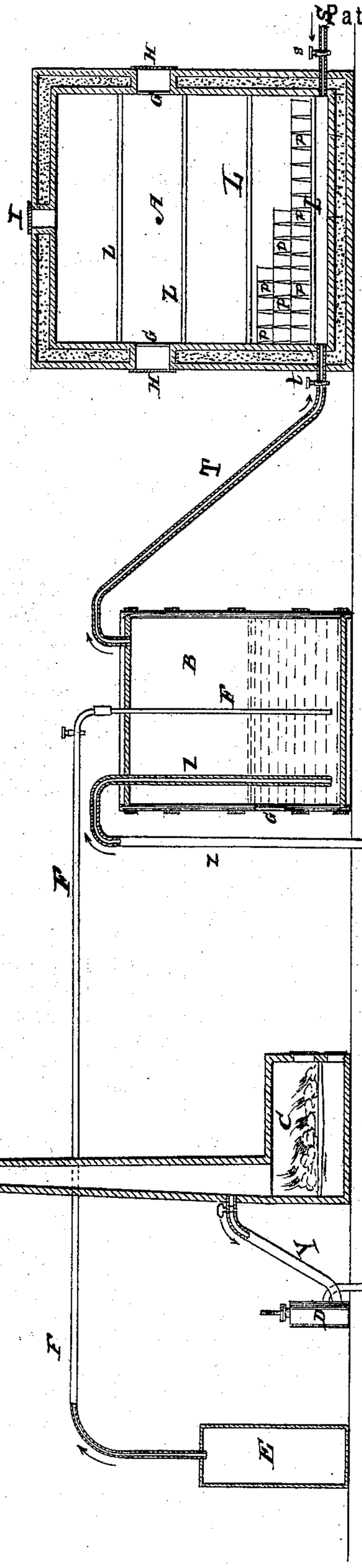
C. L. WHEELER.

Improvement in Apparatus for the Manufacture of White Lead.

No. 127,395. Patented May 28, 1872.



Witnesses:
W. Clayton
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Inventor:
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127,395

UNITED STATES PATENT OFFICE.

CHARLES L. WHEELER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN APPARATUS FOR THE MANUFACTURE OF WHITE LEAD.

Specification forming part of Letters Patent No. 127,395, dated May 28, 1872.

SPECIFICATION.

To all whom it may concern:

Be it known that I, CHARLES L. WHEELER, of Pittsburg, in the county of Allegheny and in the State of Pennsylvania, have invented certain new and useful Improvements in Corroding-Chambers used in Making White Lead; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing forming a part of this specification.

My invention is an improved mode of constructing and using a "stack" or "corroding-chamber" for making white lead; and consists in forming the "stack A," of a suitable size, say twelve feet in each dimension, with double walls of brick or wood, packed with sawdust or other non-conductor of heat, the steam-heating pipe S leading into the stack near the bottom, and having a stop-cock, *s;* and the pipe T, for admitting the purified and heated carbonic-acid gas into the stack near the bottom at the other side, the admission of the gas being regulated by stop-cock *t;* and the perforated movable shelves or floors L, adapted to receive, and packed with pots, P, charged with acetic acid and metallic lead. In another specification, executed by myself this day, I have fully described the process of making white lead by the use of the above-described stack.

In the drawing, A represents the stack, which may be some twelve or more feet in each dimension, made with double walls, and properly packed for the intervening space of some six inches. S is a pipe (having a stop-cock, *s*) by which live steam is admitted from a boiler near the bottom of the stack. T is the pipe (having a stop-cock, *t*) by which purified and heated carbonic-acid gas is admitted to the stack near its bottom. L L is a series of strong, perforated, movable shelves, adapted to support the pots, which are charged with acetic acid and metallic lead. P P represent the earthen pots, which contain the acetic acid and metallic lead. These "pots" are made of some suitable clay, and are slightly conical, about nine inches high and seven inches in diameter. About two-thirds from the top are projections, *o o*, upon which rest the "buckles" of metallic lead. Below these projections the pot is charged with dilute acetic acid (of about the strength of table vinegar.) The pots are provided with several perforations above the projections, for the escape of the acid-fumes. The general construction and size of these pots and their charge of acid and "buckles," is the same as practiced in the old or "Dutch process." The "buckles" are thin perforated disks of metallic lead, which rest upon projections *o o* and fill the pots.

The operation of my invention is thus: the pots, properly charged as above, with acetic acid and metallic lead, are packed into the stack upon the shelves L, as shown in the drawing, to the number of several thousands. After the stack has been thus filled and closed up, I admit live steam through pipe S for several hours, until the temperature of the stack shall be about 100° Fahrenheit, as indicated by the thermometers G, and until the metallic lead shall become slightly oxidized when the steam is cut off. After this temperature is attained and the oxidation is begun, I admit through pipe T (continuously until the stack requires to be emptied) a large volume of carbonic-acid gas, which has been previously purified and heated so that it enters the stack at about the same temperature of 100° Fahrenheit. When necessary, the stop-cock *t* regulates the admission of the gas.

My invention is intended to be an improvement in the construction and operation of the stack and its charge of "pots" containing acid and metallic lead, as practiced in the old or "Dutch process." By my invention I dispense with the use of tan or manure around and between the pots and around the stack; and by using the same kind of pots with their charge of acid and metallic lead in a stack, constructed, heated, and operated as above described, I have gained an important advantage in the manufacture of white lead.

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

The combination and arrangement, substantially as described, of "stack" A, steam-pipe S, carbonic-acid gas-pipe T, perforated shelves L, and pots P, charged with acetic acid and metallic lead.

In testimony that I claim the above-described corroding-chamber for making white lead, I have hereunto signed my name this 28th day of June, 1871.

CHAS. L. WHEELER.

Witnesses:
JO. C. CLAYTON,
F. C. BOWEN.