

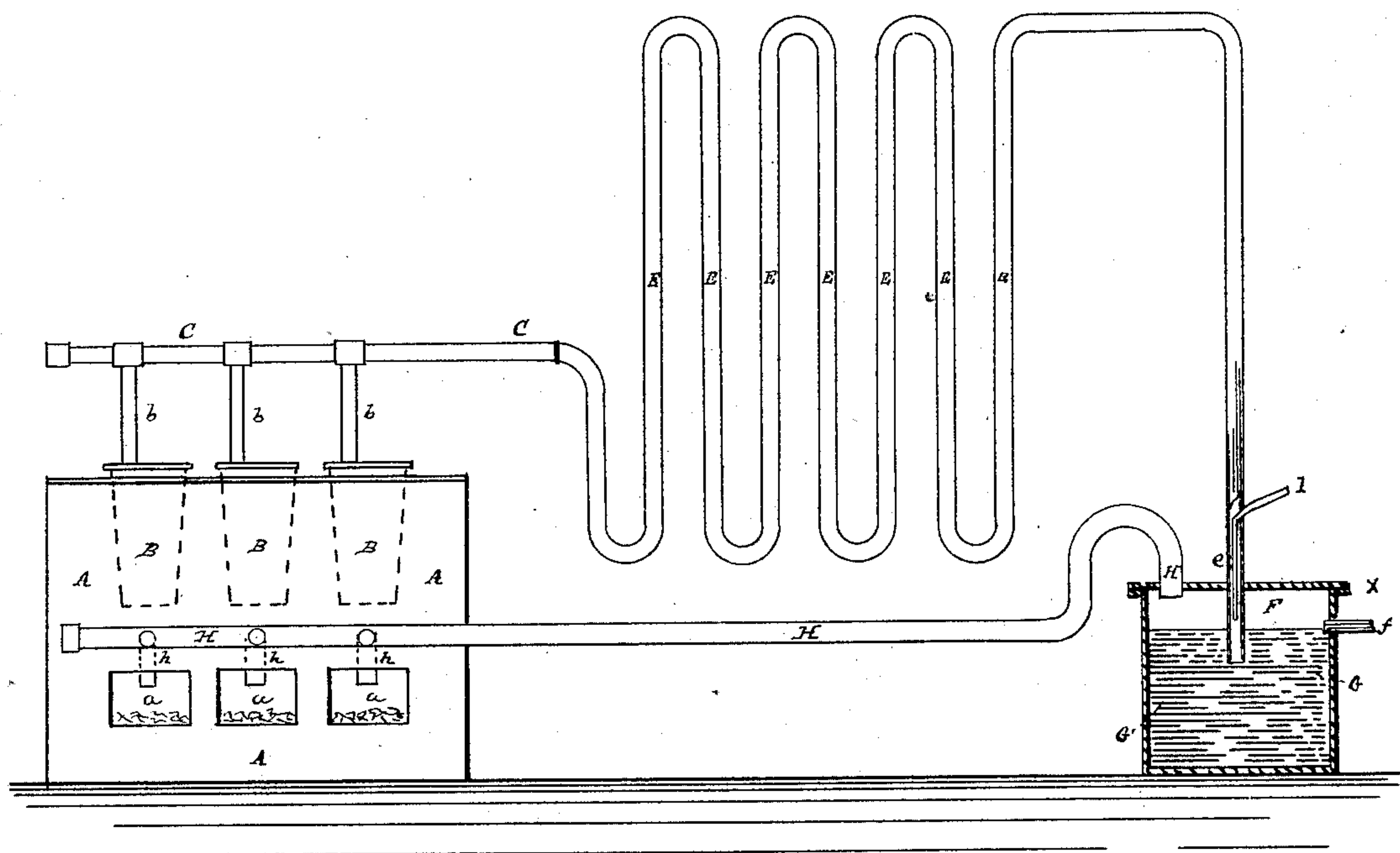
(No Model.)

C. MEYER, Jr.

APPARATUS FOR THE MANUFACTURE OF AMMONIUM SULPHATE.

No. 367,426.

Patented Aug. 2, 1887.



WITNESSES
John H. Stearns
William H. Cleveland

INVENTOR
Cord Meyer Jr
By *his Attorney*
J. Milton Stearns Jr

UNITED STATES PATENT OFFICE.

CORD MEYER, JR., OF MASPETH, NEW YORK.

APPARATUS FOR THE MANUFACTURE OF AMMONIUM SULPHATE.

SPECIFICATION forming part of Letters Patent No. 367,426, dated August 2, 1887.

Application filed March 4, 1886. Serial No. 193,985. (No model.)

To all whom it may concern:

Be it known that I, CORD MEYER, Jr., a citizen of the United States, residing at Maspeth, Newtown, in the county of Queens and State of New York, have invented certain new and useful Improvements in Apparatus for the Manufacture of Bone Products; and I do hereby declare that the following is a full, clear, and accurate description of this invention which will enable others skilled in the art to which it appertains to make and use the same

Heretofore the manufacture of bone products from bones of animals has been productive of both waste and nuisance, by reason of the escape into the atmosphere of many of the gaseous by-products of the manufacture.

In a patent granted to me dated April 21, 1885, No. 316,381, I have exemplified how a portion of such by-products are reducible into convenient ammoniacal salts by means of a steam-injection forcing all gases into varieties of acid capable of absorption and combination with the ammoniacal gases.

The object of my present invention is to dispose of all the remaining gaseous products of the bone manufacture by utilization as fuel and entire deodorization.

To carry my invention into effect, I arrange that the gaseous products not capable of absorption by the acid are conveyed without waste either under or (preferably) over the fire that heats the retorts containing the bones, or over any other fire or fires that may be necessary in the business—as over the fire under the boilers necessary to generate steam for factory purposes, as a large portion of these gases are combustible, being capable of saving by the heat generated by their combustion an equivalent amount of coal or fuel; hence the utility of the invention consists in part of the utilization of such portions as are combustible and the total deodorization of such as are non-combustible before their escape into the atmosphere.

To accomplish the purposes of my invention, I close tight the acid-tank, into which the gases are driven by the steam injector or pipe, by means of a proper cover, and provide a pipe or passage-way for said gases to be forced either under, but preferably over, the fuel in combustion by the pressure generated by steam-jet in such closed saturator. Such furnaces may be those which heat the retorts or any others in the manufactory.

I illustrate my invention by the following drawings. The figure shows the entire arrangement of the apparatus.

A is the furnace which heats the bone in retorts B' B' B'.

b b b are pipes conveying the gaseous products of combustion c c to the main.

E E E E, &c., are a usual form of condenser or sublimier of solid constituents—as tar—the termination of which series of collecting-pipes is at e; the acid-tank, G; steam-injector, I; overflow f. The tight cover to the acid-tank is represented by X.

H is the pipe conveying the unabsorbed products back to the furnaces, as shown at a a and h h h.

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

In apparatus for the manufacture of bone products, the combination of the furnace A, provided with retorts B and fire-grates a, the pipes b and C, the condensing-coil E, the covered absorbing-tank G, overflow f, and ejector I, with the return-flue H and branch-pipes h acting to return all combustible gases to the furnace, all constructed and arranged substantially as shown and described.

CORD MEYER, JR.

Witnesses:

WILLIAM H. CLEVELAND,
JOHN M. STEARNS.