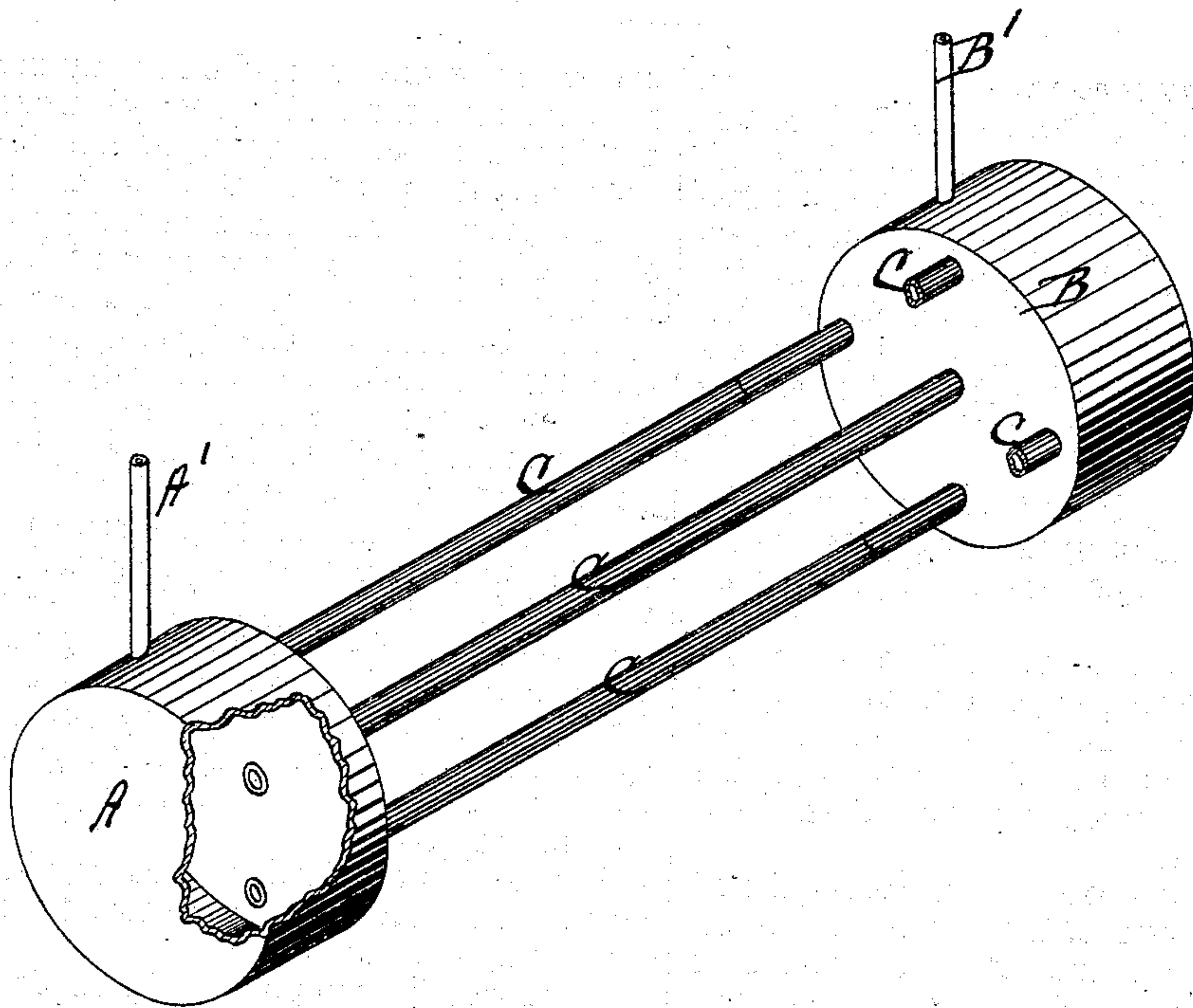


T. G. SPRINGER.

Improvement in Gas-Retorts.

No. 127,381.

Patented May 28, 1872.



Witnesses:

Henry N. Miller
A. L. Evers

Theodore T. Springer, Inventor
per *Hander Mason*
Attorneys.

UNITED STATES PATENT OFFICE.

THEODORE G. SPRINGER, OF FAYETTE CITY, PENNSYLVANIA.

IMPROVEMENT IN GAS-RETORTS.

Specification forming part of Letters Patent No. 127,381, dated May 28, 1872.

To all whom it may concern:

Be it known that I, THEODORE G. SPRINGER, of Fayette City, in the county of Fayette and in the State of Pennsylvania, have invented certain new and useful Improvements in Gas-Retorts; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon making a part of this specification.

The nature of my invention consists in the construction and arrangement of a gas-retort for vaporizing and decomposing hydrocarbon liquids.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawing, which represents a perspective view of my retort.

The retort is composed of two drums, A and B, connected by two or more tubes or pipes, C C. A pipe, A', leads into the drum A to feed the liquid hydrocarbon into the same, and from the drum B leads a pipe, B', to discharge or withdraw the fixed gas formed in the retort. The retort being heated to a sufficient degree to decompose the hydrocarbon liquid, the liquid is fed into the drum A, and at once becomes vaporized and partially decomposed; then distributing itself through the tubes or pipes C C, any particles remaining will be entirely decomposed and the fixed gas removed through the drum B and pipe B'. By thus

constructing the retort the heating surface in a given length of retort is greatly increased, and the decomposition more rapid and thorough. By corrugating the metal of which the drum A is composed still more heating surface is obtained; and this drum may be filled with sand, pumice, or other suitable material, which would also increase the heating surface and increase the rapidity and thoroughness of the decomposition. For discharging or withdrawing the fixed gas from the retort a pipe is conducted into the discharging-pipe B' for carrying into the same, under pressure, a continuous jet or stream of steam or gasoline vapor, which forces the gas out of the retort and into the cooler or mixing-meter. In place of two drums, connected by tubes, as above described, for forming a gas-retort, I may make a single cylindrical retort, corrugated longitudinally, which would give almost as much heating surface as the tubes.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A gas-retort, composed of two drums connected by means of two or more tubes or pipes, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 18th day of November, 1871.

T. G. SPRINGER.

Witnesses:

C. L. EVERT,
JAMES PATTERSON.