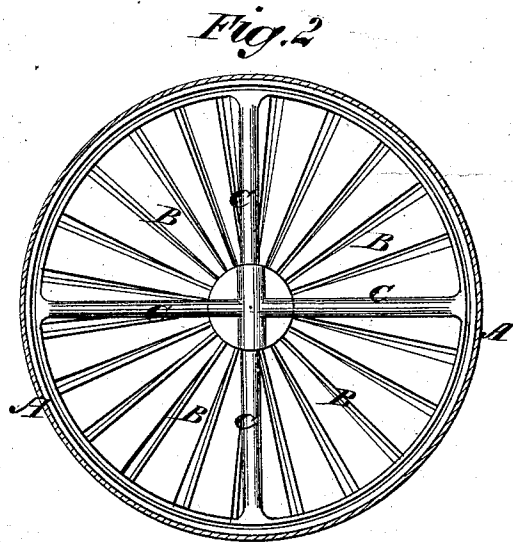
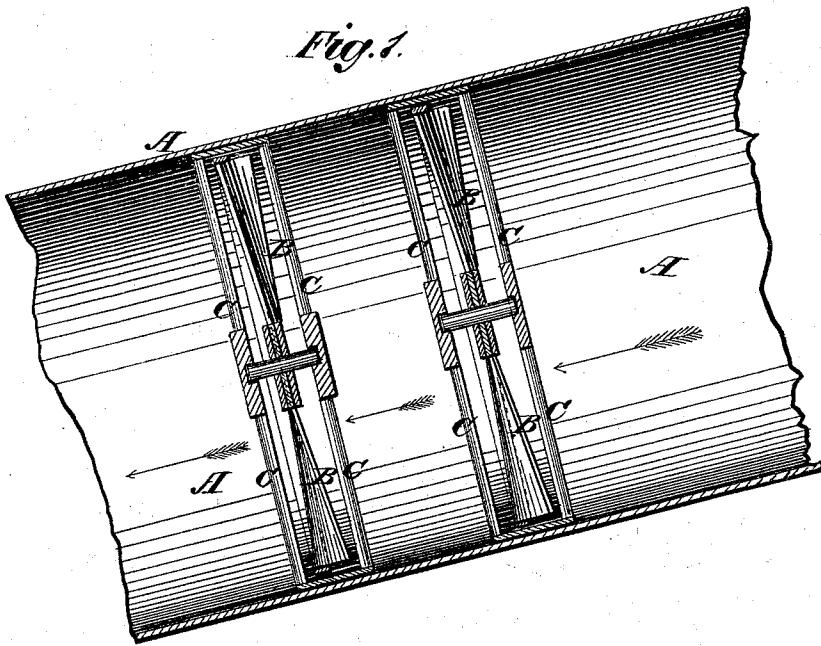


G. W. EDGE.

CONDENSERS FOR ILLUMINATING GAS.

No. 171,363.

Patented Dec. 21, 1875.



WITNESSES:

James McArdle
Alex. F. Roberts

INVENTOR:

George W. Edge
BY *[Signature]*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

GEORGE W. EDGE, OF JERSEY CITY, NEW JERSEY.

IMPROVEMENT IN CONDENSERS FOR ILLUMINATING-GAS.

Specification forming part of Letters Patent No. **171,363**, dated December 21, 1875; application filed October 4, 1875.

To all whom it may concern:

Be it known that I, GEORGE W. EDGE, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Condenser for Removing Tarry and Aqueous Matters from Gas, of which the following is a specification:

The object of the invention is to separate tar and other heavy matters from gas before entering the purifier, so that the lime in the latter may not become saturated or clogged thereby, and its action on the gas thus rendered more efficient and uniform.

The invention relates to wheels having spiral vanes, and arranged in the pipe leading from the retort to the purifier, so as to be revolved by the current of gas without the intervention of any mechanical means or appliances for that purpose. The wheels are constructed exceedingly light, and their rotary action is without the least perceptible retarding influence on the flow of gas. The impact and rubbing action of the latter on the vanes of the wheels effect the desired condensation of the tar and other heavy matters, which are thrown off by centrifugal force—the rotations being ordinarily near two hundred per minute—and are thus collected in the pipe, and thereby conducted to a suitable place for removal.

In the drawing, Figure 1 is a longitudinal section of a fragment of the pipe containing two of the wheels, and Fig. 2 a transverse section thereof.

A is the pipe leading from the retort to the purifiers. (Not shown.) The wheels B are constructed of radial fan-shaped spiral blades or vanes, and mounted on suitable axes in frames C. The arrangement of the same is transversely of the pipe A, and the vanes extend to the inner periphery thereof, their ends being joined by a flat ring, as shown, and thus held equidistant and rigid. The wheels are a cheap substitute for, and perform the function of, the coil previously or commonly used to take up the heavy matters from gas by condensation of the same on its passage through them.

What I claim is—

The wheels B B, constructed with the radial spiral vanes, and arranged transversely within, and completely spanning the diameter of, the pipe leading from the retort to the purifiers, as shown and described, to admit of their rotation by the force of the current of gas, as shown and described.

GEO. W. EDGE.

Witnesses:

JAMES H. HUNTER,
ALEX. F. ROBERTS.