

(No Model.)

A. RANDOL.
GAS BURNING APPARATUS.

No. 316,059.

Patented Apr. 21, 1885.

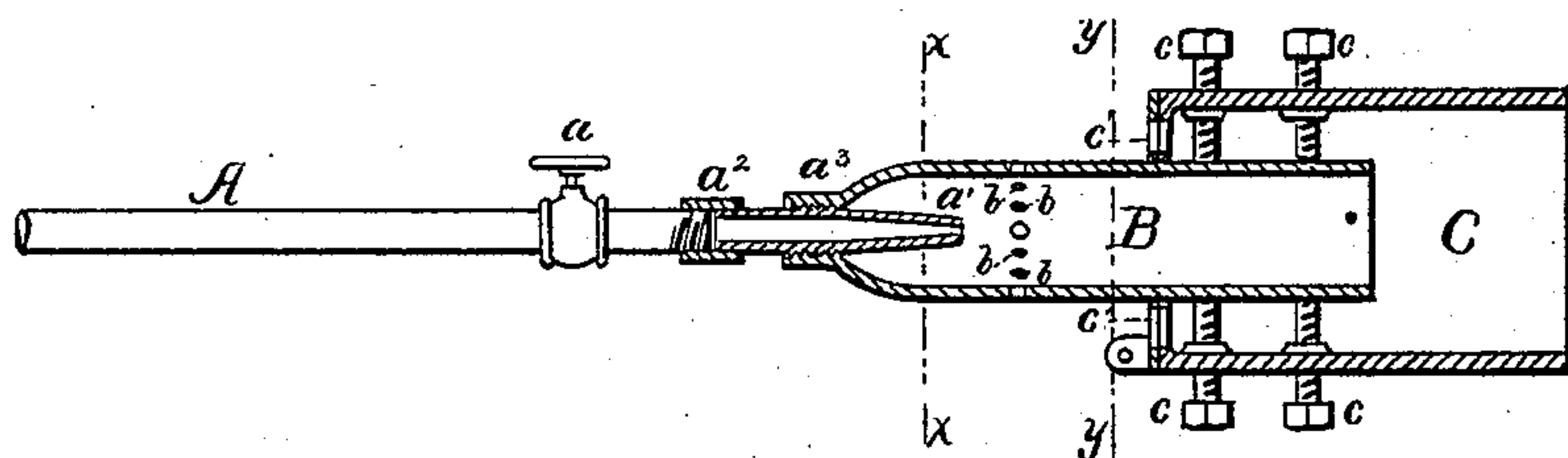


Fig. 1.

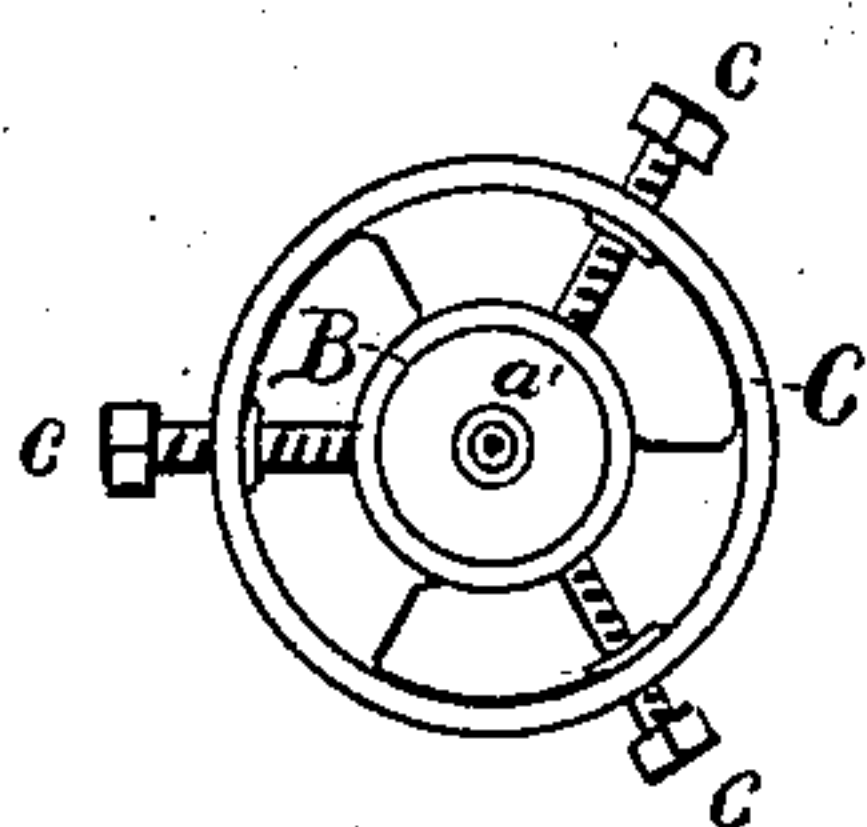


Fig. 2.

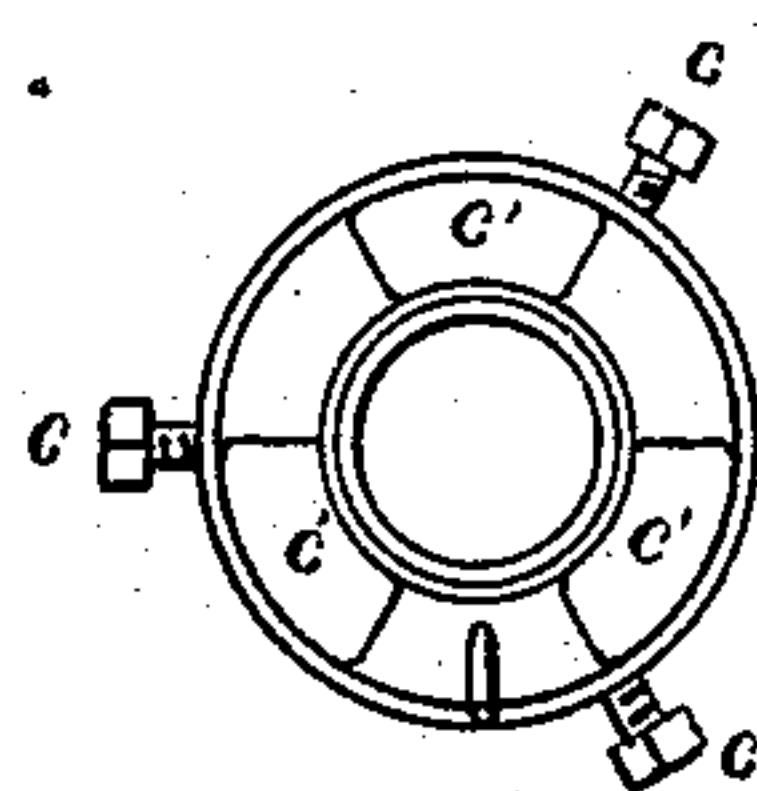


Fig. 3.

WITNESSES:

M. E. Harrison.

R. H. Maffey.

INVENTOR:

Alexander Randol
by J. H. Stevenson
Atty.

UNITED STATES PATENT OFFICE.

ALEXANDER RANDOL, OF TARENTUM, ASSIGNOR OF SIX-TENTHS TO GEORGE S. McKEE, OF ALLEGHENY CITY, AND JOHN M. ARNOLD, OF PITTSBURG, PENNSYLVANIA.

GAS-BURNING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 316,059, dated April 21, 1885.

Application filed December 26, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER RANDOL, of Tarentum, Pennsylvania, have invented a new and useful Improvement in Gas-Burning Apparatus, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings.

Similar letters of reference indicate corresponding parts.

10 The object of my invention is to provide an improved burner for using natural or manufactured gas in connection with the furnace.

15 In the accompanying drawings, Figure 1 is a longitudinal section of burner apparatus as attached to the furnace combustion-chamber. Fig. 2 is a cross-section taken at $x x$, and Fig. 3 is a cross-section taken at $y y$.

20 A represents a common gas-pipe. a is a regulating-valve. a' is the burner proper, being secured to the pipe A at a^2 and to the combustion-chamber B at a^3 .

25 The gas passes through the pipe A into the burner a' , and on into the chamber B, as seen in Fig. 1. The gas on entering the chamber B is ignited, and then comes in contact with jets of air admitted through the perforations $b b$ in the chamber B. This air being admitted in this way and at this point thoroughly mixes with the gas, thus contributing to a more perfect combustion than is usually attained. The flame thus created passes on out of the chamber B into the larger combustion-chamber C, in which the combustion is carried on and accelerated by the admission of air at the 35 end of this chamber C at $c' c'$, this being regulated by any usual regulator device.

The chambers B and C are made of any good refractory material, such as fire-clay tile or metallic pipe.

The chamber B is held in position about the center of the chamber C by a series of adjustable supporting-screws, $c c$. These screws c are arranged in series bearing against the cylindrical chamber B at three equidistant points of its circuit in cross-section. By means of them a lateral adjustment of said chamber may be effected as well as a longitudinal adjustment.

The end of the chamber C will be closed, (the end at $c' c'$), having only holes for admitting the air, as mentioned before.

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

35 The chambers B and C, in combination with burner a' , which discharges into the former, and the screws c , which pass inward through said chamber C, and bear against said chamber B at different points of its periphery in cross-section, to allow lateral as well as longitudinal adjustment, substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my invention I hereto set my hand in presence of two witnesses.

ALEX. RANDOL.

Witnesses:

GEO. S. McKEE,
JAMES A. FETZER.