

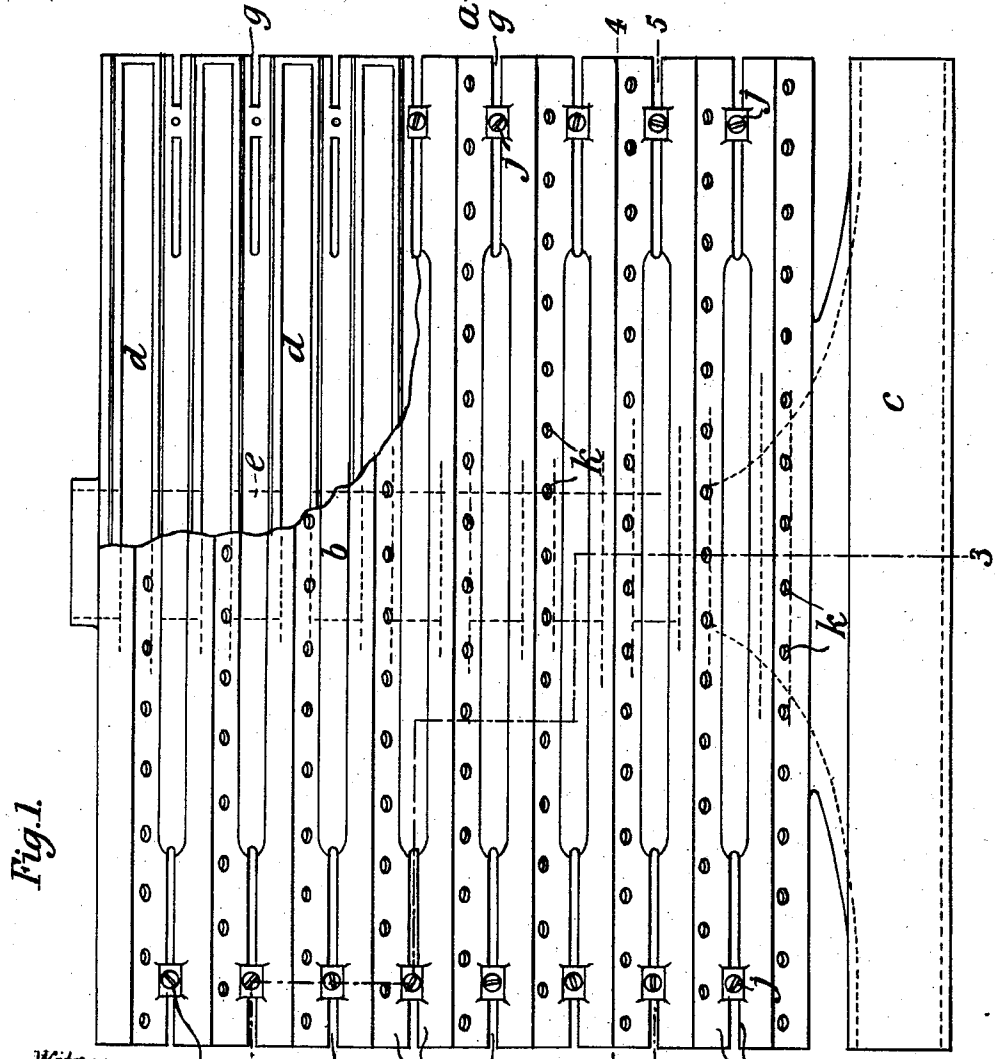
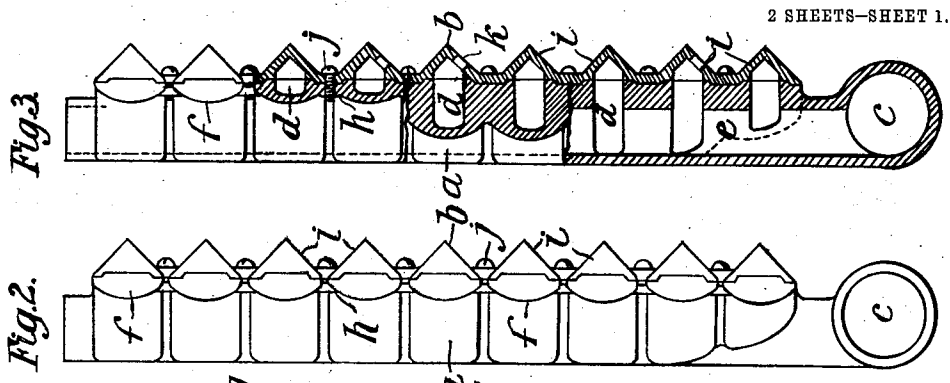
H. E. HARRIS.
GAS BURNER.

APPLICATION FILED FEB. 13, 1911.

1,024,849.

Patented Apr. 30, 1912.

2 SHEETS—SHEET 1.



Witnesses:
J. K. Rasmussen
R. E. Barry.

Inventor
Henry C. Harris
which is not a

1,024,849.

Patented Apr. 30, 1912.

2 SHEETS-SHEET 2.

Fig. 4.

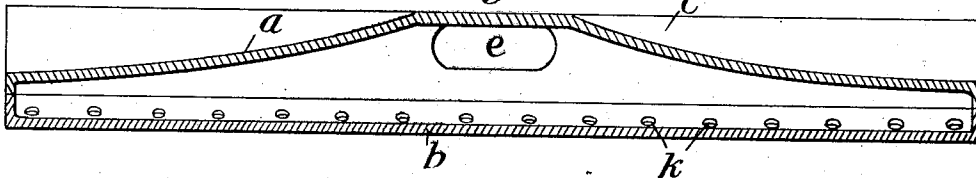


Fig. 6.

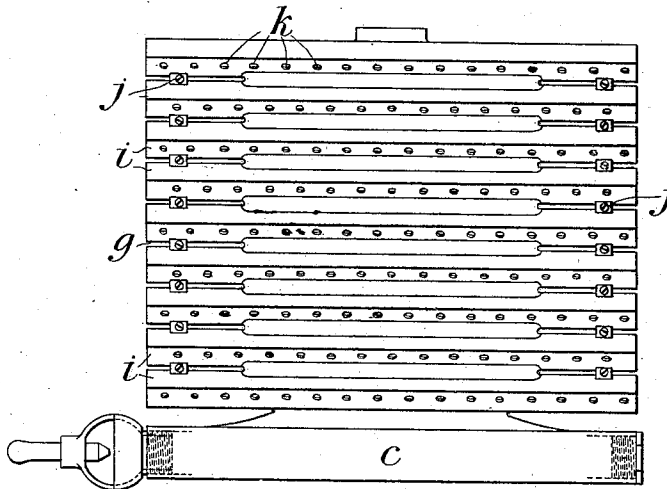
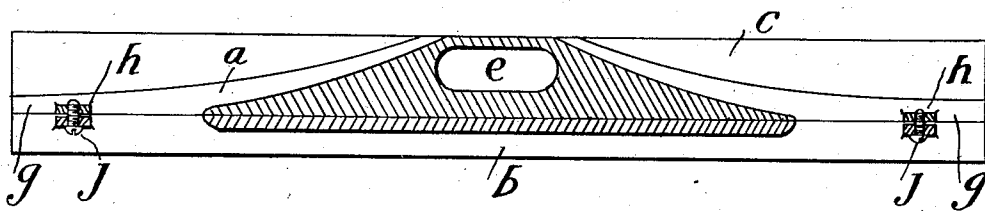


Fig. 5.



Witnesses.

J. K. Moore
Robt. E. Barry.

Inventor.

Henry E. Harris
by Edwin H. Brown, atty.

UNITED STATES PATENT OFFICE.

HENRY ELLIS HARRIS, OF LONDON, ENGLAND.

GAS-BURNER.

1,024,849.

Specification of Letters Patent.

Patented Apr. 30, 1912.

Application filed February 13, 1911. Serial No. 608,323.

To all whom it may concern:

Be it known that I, HENRY ELLIS HARRIS, a subject of the King of Great Britain, residing at 64 Finsbury Pavement, London, England, have invented new and useful Improvements in Gas-Burners, of which the following is a specification.

My invention relates to gas burners of the kind provided with a series of superposed rows of burner bars from holes or nozzles in which the gas jets issue.

The object of this invention is to provide a burner in which the supply of gas entering the same shall be uniformly distributed throughout the entire burner. To accomplish this I construct the burner in two sections and provide tapering lateral gas passages between said sections to which the mixture is supplied.

To enable my invention to be fully understood, I will describe the same by reference to the accompanying drawing, in which:—

Figure 1 is a front elevation of a burner constructed according to my invention part of the front section being broken away to show the back section. Fig. 2 is a side view of the same. Fig. 3 is a section on the line 3—3, Fig. 1. Figs. 4 and 5 are sections on the lines 4—4 and 5—5 respectively of Fig. 1. Fig. 6 is a front elevation of my complete burner to a reduced scale with a connection for a supply of gas and air.

a, b indicated the back and front sections respectively of the burner, the said back section having at the lower part the horizontal tube *c* which forms the mixing chamber of the burner, and having the upper portion formed with a series of horizontal grooves *d* extending on either side of a vertical passage *e* which connects them with the mixing chamber *c*. The grooves *d, d* are made deepest at their point of connection with the passage *e* and gradually decrease in depth toward their extremities, as shown in Figs. 3 and 4, and in order to reduce the weight of the burner as much as possible, the exterior of the said plate is shaped to correspond with the depth of the grooves as clearly shown in

Fig. 4, and the backs of the portions in which the individual passages are formed are advantageously rounded as shown at *f* in Fig. 2, and to such an extent that openings *g* are formed between the grooved portions of the plate as shown in Fig. 1, except that connecting portions *h, h* are left, which portions serve for the reception of screws as hereinafter described for attaching the part *b* of the burner to the part *a*. The section Fig. 5 shows the connecting portion of metal which is left between every pair of grooved portions.

It will be noticed that the vertical passage *e* opens into the mixing chamber with a trumpet-shaped or tapering mouth as indicated by the dotted lines in Fig. 1, so as to allow of a large volume of gas and air entering and flowing up through the passage *e*.

The front plate of the burner is formed with a series of angular corrugated portions *i, i* which are joined to the back plate *a* at the edges of the grooved portions in the back plate, this front plate being secured to the back plate by screws *j, j* or other suitable means, and having openings which register with the spaces *g, g* in the back plate *a*. Each of the angular corrugations *i* is provided on the underside with a series of holes *k, k* from which the gas mixture issues and burns.

Claims—

1. A gas burner comprising a body provided with a tapered vertical passage, a series of tapered lateral passages communicating with said tapered vertical passage, burner openings provided in said tapered lateral passages, and a mixing chamber provided at the lower end of said tapered vertical passage.

2. A gas burner comprising a rear section provided with a mixing chamber, a tapered vertical passage communicating with said mixing chamber, a series of lateral grooves communicating with said passage, a front section provided with burner openings which register with said lateral grooves and suitable means connecting the sections.

3. A gas burner comprising a rear section provided with a mixing chamber, a tapered vertical passage communicating with said mixing chamber, a series of tapered lateral
5 grooves communicating with said vertical passage, a front section provided with burner openings which register with said ta-

pered lateral grooves, and suitable means connecting the sections.

HENRY ELLIS HARRIS.

Witnesses:

JOHN E. BOUSFIELD,
A. ALBUTT.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."