

(No Model.)

R. B. MAIN.  
BURNER FOR GAS FIRES.

No. 547,959.

Patented Oct. 15, 1895.

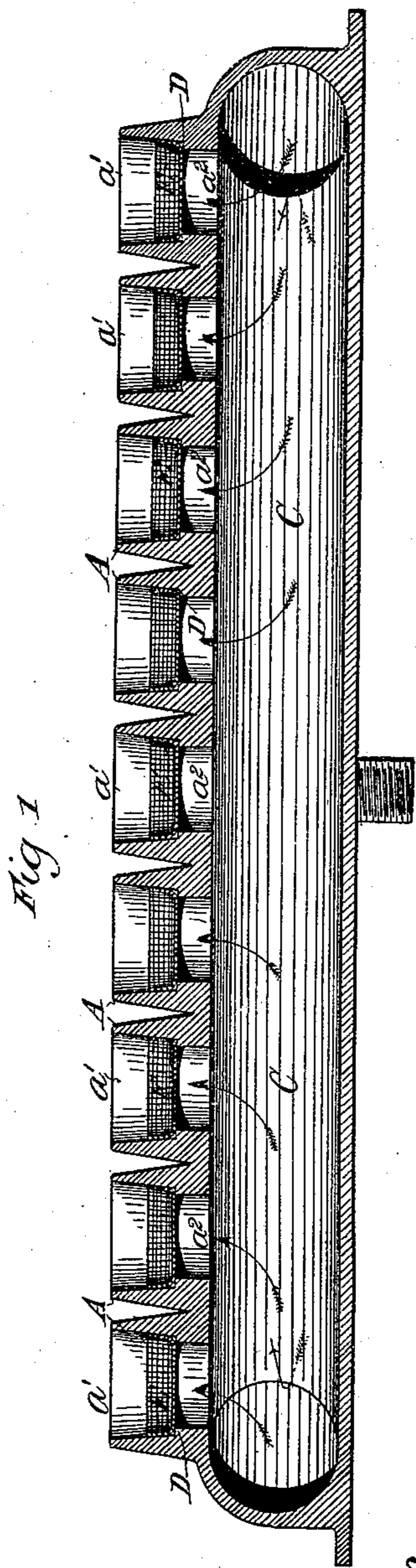


Fig. 1

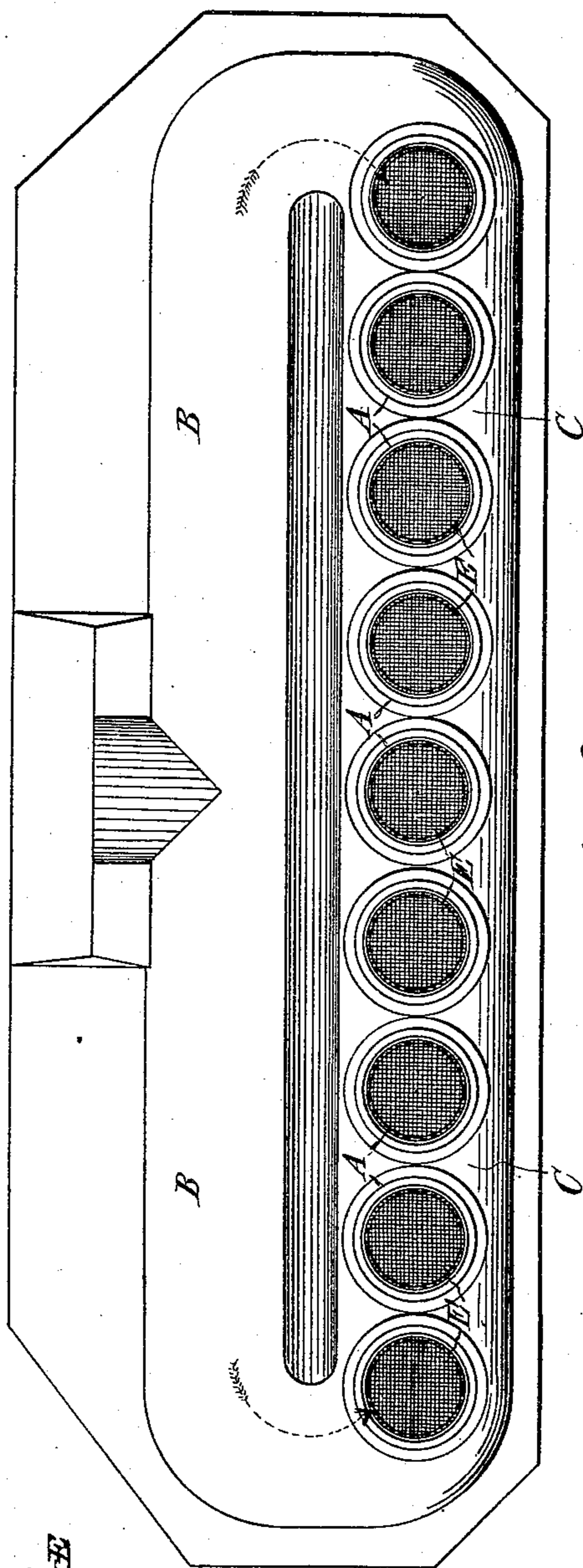


Fig. 2

Fig. 3.



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# UNITED STATES PATENT OFFICE.

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## BURNER FOR GAS-FIRES.

SPECIFICATION forming part of Letters Patent No. 547,959, dated October 15, 1895.

Application filed May 1, 1894. Serial No. 509,716. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT BAILLIE MAIN, gas cooking and heating engineer, a subject of the Queen of Great Britain and Ireland, residing at Argyle Works, Kinning Park, Glasgow, Scotland, have invented Improvements in Burners for Gas-Fires, of which the following is a specification.

My invention has for its object a burner for gas-fires which will altogether prevent firing back, as well as greatly reduce or lessen the hissing noise which is so common and disagreeable in gas-fires at present in use.

In carrying my invention into practice I make the outlets of the nozzles of the burner where combustion takes place of bell shape or widening, so as to flare upwardly, and with a flange or shoulder or other support at the lower ends or at any suitable distance from the top, and on these flanges, shoulders, or supports rests a sheet of perforated metal or gauze of any suitable material and having turned-up edges, so as to provide an upwardly-flaring screen and to facilitate placing and maintaining it in position, as well as to enable it to be easily removed for cleaning or renewal, if necessary.

In the drawings, Figure 1 is a section of one form of burner for gas-fires, and Fig. 2 is a plan of the same. Fig. 3 is a sectional view of the gauze-thimble.

A are the nozzles of the burners, the outlets  $a'$  of which, where combustion takes place, as will be seen from the drawings, are wider than the inlets  $a^2$ .

B is the mixing pipe or chamber, and C is the pipe which conveys the mixed gas and air to the nozzles A.

D are the flanges or shoulders provided on the interior of the nozzles A to support the gauzes E, which are so shaped in the form of upwardly-flaring thimbles that when placed into the nozzles A the turned-up edges press against the sides of the nozzles, forming a tight joint to secure them firmly (though removably fitted) when pressed into position. The cold current of gas and air passing continuously through the perforated metal or gauzes E at a distance from point of ignition prevents them becoming overheated and so wasting away by direct contact with the flame of the fire, and also prevents the flame striking back and burning at injector.

I claim—

1. A burner for gas-fires comprising an upwardly extending nozzle A, having an inlet  $a^2$  and outwardly flaring outlet  $a'$  and a removable screen E having turned up edges forming a thimble fitting the flaring outlet; substantially as described.

2. A burner for gas-fires, comprising an upwardly extending nozzle A having an inlet  $a^2$  an outlet  $a'$ , a shoulder D intermediate of the inlet and outlet and a removable screen E supported upon the shoulder, having turned up edges forming a thimble fitting the outlet; substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two witnesses.

ROBERT BAILLIE MAIN.

Witnesses:

E. LOUDON,  
DAVID GIBB.