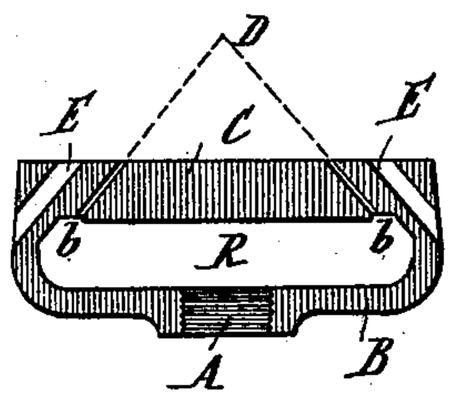
(No Model.)

J. LEBEAU & L. MINEUR.

BURNER FOR ACETYLENE GAS.

No. 592,299. Patented Oct. 26, 1897.



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UNITED STATES PATENT OFFICE.

JULES LEBEAU, OF CHATELINEAU, AND LEON MINEUR, OF BRUSSELS, BELGIUM.

BURNER FOR ACETYLENE GAS.

SPECIFICATION forming part of Letters Patent No. 592,299, dated October 26, 1897.

Application filed November 6, 1896. Serial No. 611,278. (No model.) Patented in Belgium March 25, 1896, No. 120,594, April 16, 1896, No. 120,904, and September 19, 1896, No. 123,584; in England May 5, 1896, No. 9,861, and in France 19, 1896, No. 295,845.

To all whom it may concern:

Be it known that we, JULES LEBEAU, residing at Chatelineau, and LEON MINEUR, resid- at Brussels, Belgium, subjects of the King of Belgium, have invented certain new and useful Improvements in Burners for Acetylene Gas, of which the following is a specification.

This invention has been patented in France under date of July 19, 1896, No. 295,845; in Belgium, No. 120,594, dated March 25, 1896, No. 120,904, dated April 16, 1896, and No. 123,584, dated September 19, 1896, and in England by provisional protection under date of May 5, 1896, No. 9,861.

The burners used hitherto for the purpose of illumination by means of acetylene gas are more or less defective because they do not allow of a suitable sufficiently constant or steady direction of the gas-jets meeting in one determined point to create a flat, steady, and smokeless flame. Generally speaking, burners for acetylene gas do not provide for a rational feeding of air to the flame. In most cases the gas-flame must assimilate the necessary quantity of air by the simple contact with the outside air. This defective alimentation is largely the cause of the bad working of the burner, which is still increased by the fact that the least depression of the gas fed to the flame will cause its steadiness to vary.

The present invention refers to new devices, the combination of which has enabled us to construct an improved burner for acetylene gas which is free from these defects and whose features are sufficiently shown in the annexed drawing, in which the figure is a sectional view.

My burner is made of some suitable material, preferably soapstone or refractory earth, of sufficient size to allow of the providing in its upper part of two or more diminutive conduits *b*, inclined at a determined angle—for instance, about seventy-five to eighty degrees—so as to cause a meeting of the gas-jets coming out of these conduits at the point D.

The invention consists in the combination, with the block, of two or more air-conduits E provided therein and which are parallel with the outlet-conduits *b*, in order to create through those conduits a suction of air in jets directed in parallel with the gas-jets and which meet in the flame at a suitable point, thus insuring a regular alimentation of the flame through the burner itself. It is obvious that these means alone or a combination thereof constitute an important improvement. Not mentioning the simplicity of its construction, this invention enables us to realize a perfectly uniform burner which cannot become irregular, as the dilatation is homogeneous and uniform over the entire mass. The result thereof is that the orifices of the conduits *b* can never be displaced the one in relation to the other, and thus that the meeting of the gas-jets will always take place at the point. Besides the means of assuring the normal formation of the flame as well as its extension and regular alimentation by air we have provided, inside the block constituting the burner, a small reservoir R by hollowing the mass between the upper part C of the burner and its lower part A, which is fixed upon the gas-pipe. The principal object of this reservoir is to allow of the formation of a small layer of gas inside the burner in order to compensate, if only for a very short moment, the decrease in the ressure that may eventually take place in the conduit. By its combination with the other described devices it completes the whole of the burner and coöperates to the production of an absolutely steady smokeless flame of a uniform extension.

What we claim is—

In combination with a block of suitable material which forms the burner for acetylene gas, outlet-conduits for the gas in that block, arranged so as to make the gas-jets meet at a determined point and air-conduits also cut out of the block parallel with the gas-conduits, substantially as described.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

JULES LEBEAU.
LEON MINEUR.

Witnesses:
GEORGE BEDE,
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