

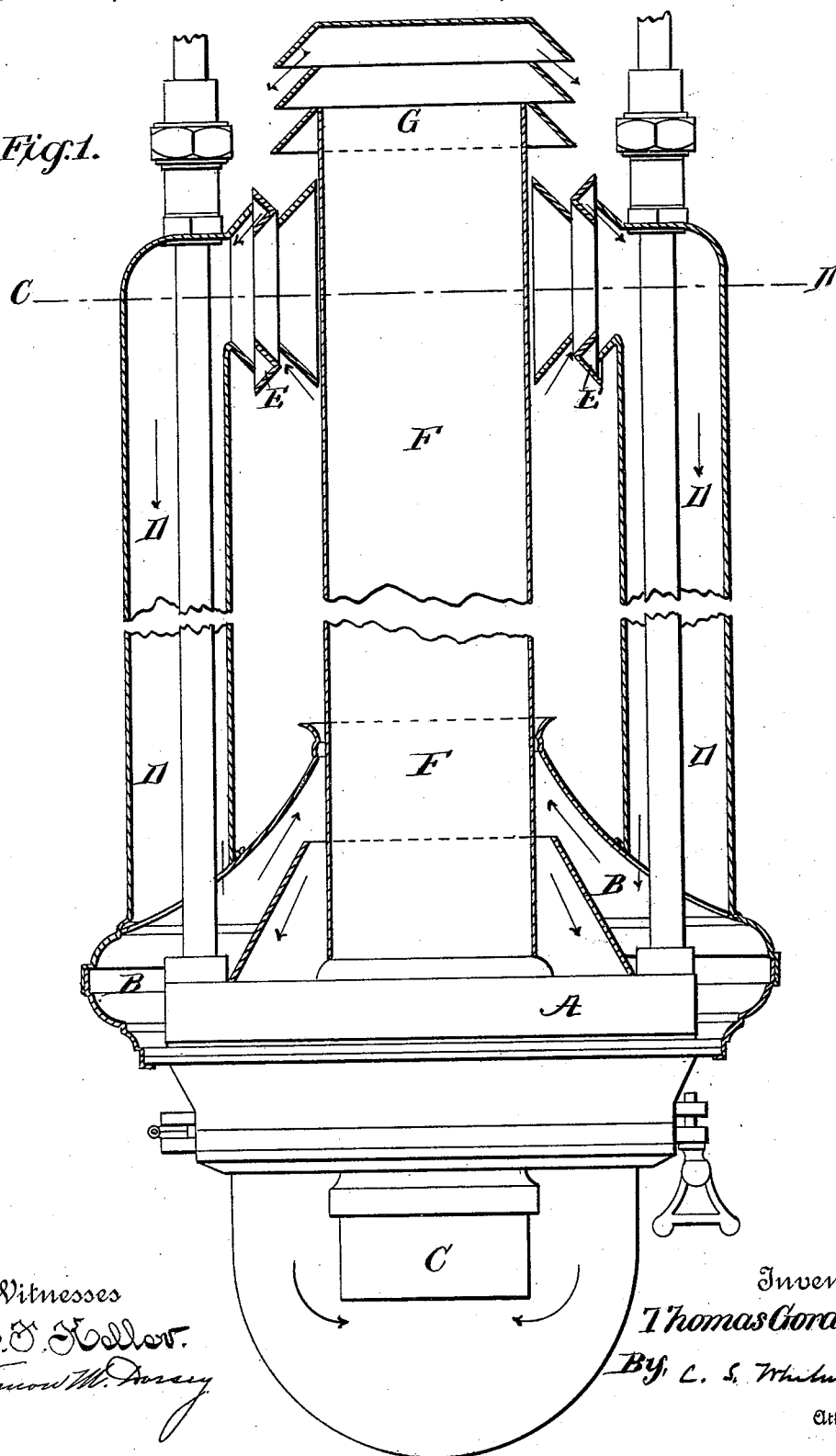
T. GORDON.

WIND CASING FOR REGENERATIVE GAS LAMPS.

No. 421,698.

Patented Feb. 18, 1890.

Fig. 1.



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(No Model.)

2 Sheets—Sheet 2.

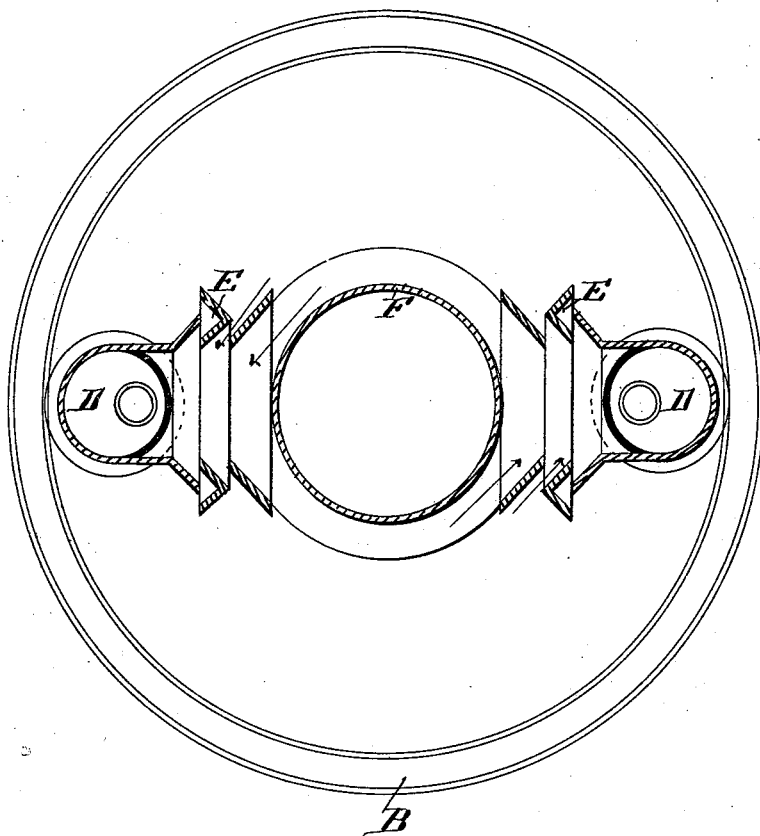
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Patented Feb. 18, 1890.

Fig. 2.



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UNITED STATES PATENT OFFICE.

THOMAS GORDON, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
SIEMENS-LUNGREN COMPANY, OF PENNSYLVANIA.

WIND-CASING FOR REGENERATIVE GAS-LAMPS.

SPECIFICATION forming part of Letters Patent No. 421,698, dated February 18, 1890.

Application filed February 4, 1889. Serial No. 298,623. (No model.)

To all whom it may concern:

Be it known that I, THOMAS GORDON, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented certain new and useful Improvements in Wind-Casings for Regenerative Gas-Lamps, of which the following is a specification.

In the use of inverted regenerative gas-lamps provided with a chimney for the escape of the products of combustion and inlet-tubes for the supply of air to the flame it has been noticed that under normal conditions the chimney-draft is sufficient to draw inward a sufficient quantity of air to support combustion, but that a large volume of air flowing past the inlets tends to draw outward the entering air, and thus counteracts the chimney-draft and causes the smoking of the lamp.

It is the object of my invention to obviate this difficulty; and to that end my present improvement consists in surrounding the burner with an air-tight chamber, the inlet-tubes of which are provided with injectors which deflect the air inward into the said chamber, and also in providing the escape-flue or chimney with an ejector for preventing a downward draft therein.

In the accompanying drawings, in which corresponding parts are designated by similar letters, Figure 1 is a vertical section, and Fig. 2 is a horizontal section on the line C D of Fig. 1.

In the drawings, A is an inverted gas-burner of the same class and general construction as that described in another application for Letters Patent of the United States filed by me in the United States Patent Office and serially numbered 249,511.

B is an air-chamber surrounding the burner, into which the air flows downward from inlets in the upper part of the lamp.

C designates the escape-flue through which the products of combustion and heated air pass upward to the point of exit.

D D represent the air-inlet flues arranged vertically above the said air-chamber and around the gas-inlet tubes in the manner shown and described in another application for Letters Patent filed by me and serially numbered 261,912. At the upper ends of these air-inlet tubes are arranged injectors E,

which protect the air-inlets of the chamber B.

F is the chimney, the outlet end of which is protected by an ejector G of any suitable form.

When the lamp is lighted, the waste products of combustion will pass upward into and through the escape-flue in the manner described in my said application serially numbered 249,511 to the outer air, thereby causing air to flow inward through the air-inlet tubes D D. Under normal conditions the chimney draft is sufficient to draw in the amount of air required for combustion, but in lamps heretofore constructed it has been noticed that a large body of air flowing past the air-inlets causes the air therein to flow outward, and thus counteracts the effect of the chimney-draft and causes the lamp to smoke. In order to obviate this difficulty, I have placed the injectors E in the air-inlets, which serve to force the air inward when the wind blows upon them, and have placed ejector G upon the outer end of the escape-flue, which, when thus applied, serves to maintain the proper and requisite circulation of air through the lamp and prevent smoking and the clogging of the chambers.

Having thus described the construction and operation of my invention, I claim and desire to secure by Letters Patent—

1. In an inverted regenerative burner, the combination of a central escape-flue, an air-tight chamber surrounding the burner, air-inlets leading into the air-tight chamber provided with injectors operated by a current of air flowing thereby, and a chimney provided with an ejector, as and for the purposes described.

2. In an inverted regenerative gas-burner, the combination of a central escape-flue provided with a chimney, an ejector surrounding the chimney, an air-tight chamber surrounding the escape-flue, vertical air-inlet tubes rising from the air-tight chamber, and air-injectors operated by a current of air flowing thereby, surrounding the inlets of the air-tubes, as and for the purposes described.

In testimony whereof I have hereunto set my hand in presence of two witnesses.

THOS. GORDON.

Witnesses:

CHAS. C. MATTHEWS,
EUGENE MOREAU.