No. 624,391. Patented May 2, 1899.

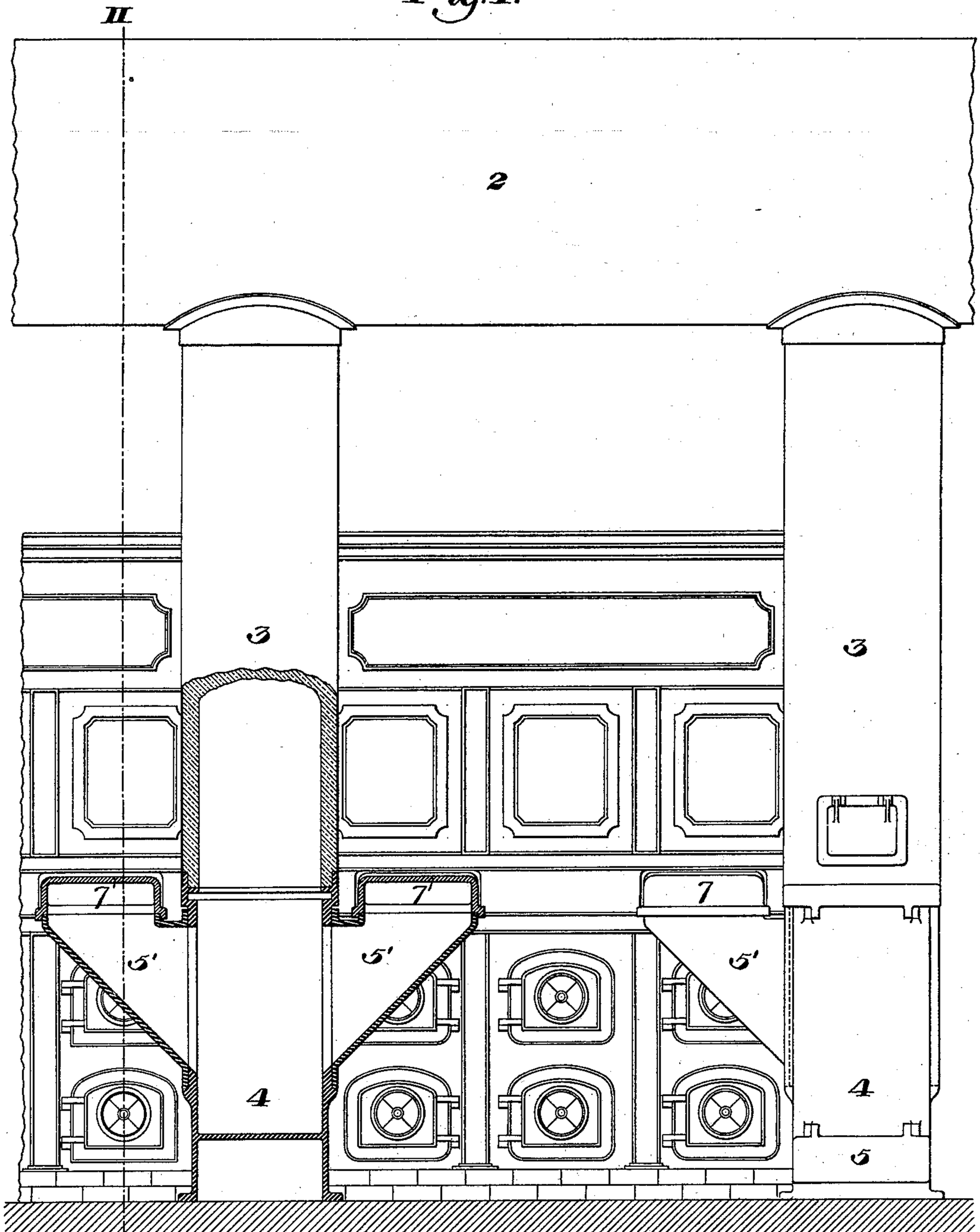
E. E. SLICK.

GAS BURNER.

(Application filed May 24, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.



WITNESSES

Warren W. Swartz

H. M. Corwine

INVENTOR

Edwin. E. Slick

by Bakewell & Bakewell

his attys.

No. 624,391. Patented May 2, 1899.

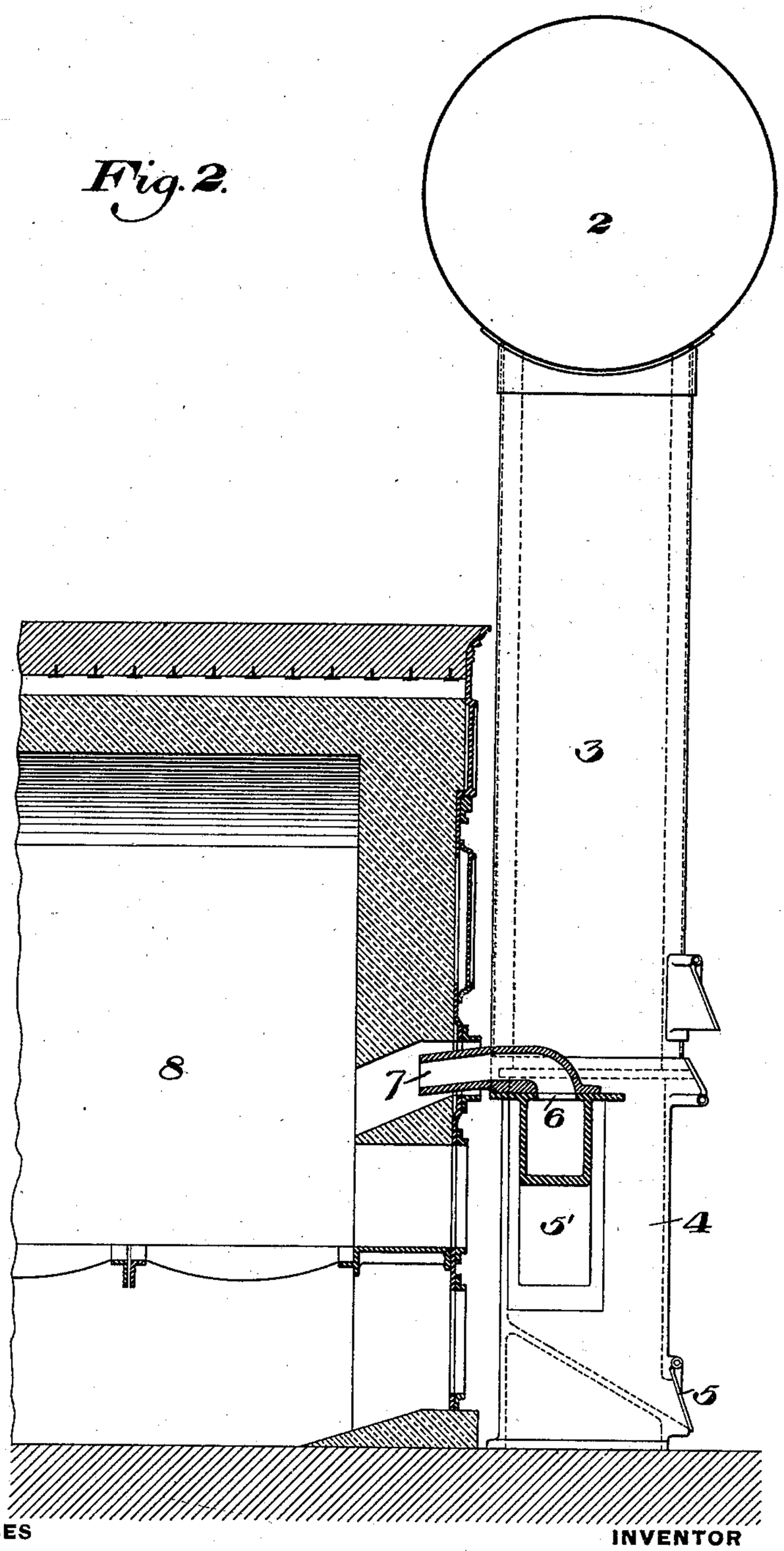
E. E. SLICK.

GAS BURNER.

(Application filed May 24, 1898.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 2.



WITNESSES

Warren W. Swartz

H. M. Corwin

INVENTOR

Edwin. E. Slick

by Bakewell & Bakewell

his attys.

UNITED STATES PATENT OFFICE.

EDWIN E. SLICK, OF BRADDOCK, PENNSYLVANIA.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 624,391, dated May 2, 1899.

Application filed May 24, 1898. Serial No. 681,604. (No model.)

To all whom it may concern:

Be it known that I, EDWIN E. SLICK, of Braddock, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Gas-Burners, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 shows in front elevation, partly in vertical section, a boiler-furnace provided with my improved gas-burner. Fig. 2 is a vertical section on the line II II of Fig. 1.

2 represents the gas pipe or main by which the gas is conveyed to the burners and which is supported overhead, as shown in the drawings, or may be otherwise suitably arranged.

3 3 are the branches or downtake pipes, which lead from the pipe 2 and communicate with dust-catching chambers 4 4, provided with suitable doors 5 for the removal of deposited flue-dust. From each of the dust-chambers 4 extend lateral branches 5′ 5′, which are made in separable parts or castings, as shown in Fig. 1, and are detachably secured so as to communicate with openings in the sides of the dust-chambers. At the upper ends of these branches 5′ 5′ are gas-ports 6 6, communicating with the gas-burner nozzles 7 7, discharging into the combustion-chambers 8. Each nozzle 7 is preferably arranged to slide on its seats, so that when in forward position, as in Fig. 2, an opening is provided for the passage of gas into the combustion-chamber and that when drawn back the nozzle itself shall act as a slide-valve to close the port 6. My broader claims are not, however, limited to this construction.

A feature of novelty in my invention is that I employ two gas-burners branching from the dust-catcher chamber, and thus adapted to supply two burners or combustion-chambers. The dust-catchers are efficient in cleaning the gas, for the deposited dust may be easily removed through the doors 5. When it is desired to use the combustion-chamber for burning coal, the branch pipes 5′ and the burners may easily be detached and removed and the openings in the sides of the dust-chambers closed with cover-plates. Any convenient number of branches may be applied to the dust-catching chambers.

The burner may be used with advantage not only with boiler-furnaces, but with hot-blast stoves or combustion-chambers of other types.

The advantages of my invention will be appreciated by those skilled in the art. It is easily applied to use and constitutes very convenient means for burning gas.

Within the scope of the invention as defined in the broader claims changes may be made in the form and structure of the parts, since

What I claim is—

1. The combination of an overhead gas-main, a branch gas-pipe leading downwardly therefrom in front of a furnace, a dust-catcher at the lower end of the branch pipe, and a burner secured to a branch from the dust-catcher, and directed into the furnace-chamber, substantially as described.

2. The combination of an overhead gas-main, branch pipes leading downwardly therefrom in front of a series of furnace-chambers, each branch terminating in a dust-catcher having a plurality of lateral branches, and burners secured to said branches and projecting into the furnace-chambers, substantially as described.

3. The combination of an overhead gas-main, branch pipes leading downwardly therefrom, each branch terminating in a dust-catcher, a series of furnace-chambers in front of the branches, each branch being in line with a dividing-wall between the furnace-chambers and a plurality of lateral branches secured to each dust-catcher and projecting into the furnace-chambers, substantially as described.

4. The combination of an overhead gas-main, a branch gas-pipe leading downwardly therefrom in front of a furnace, a dust-catcher at the lower end of the branch pipe, a detachable lateral branch secured to the dust-catcher and a burner secured to the branch and projecting into the furnace-chamber, substantially as described.

5. The combination of an overhead gas-main, branch pipes leading downwardly there-

from, in front of a series of furnace-chambers, each branch pipe terminating in a dust-catcher, a plurality of lateral branches with upwardly-sloping bottoms secured to the dust-catcher, and burners carried on the branches and projecting into the furnace-chambers, substantially as described.

In testimony whereof I have hereunto set my hand.

EDWIN E. SLICK.

Witnesses:
W. H. LINNELL,
E. H. HUTZEN.