

(No Model.)

A. L. SHORE.
HYDROCARBON BURNER.

No. 404,442.

Patented June 4, 1889.

Fig. 1.

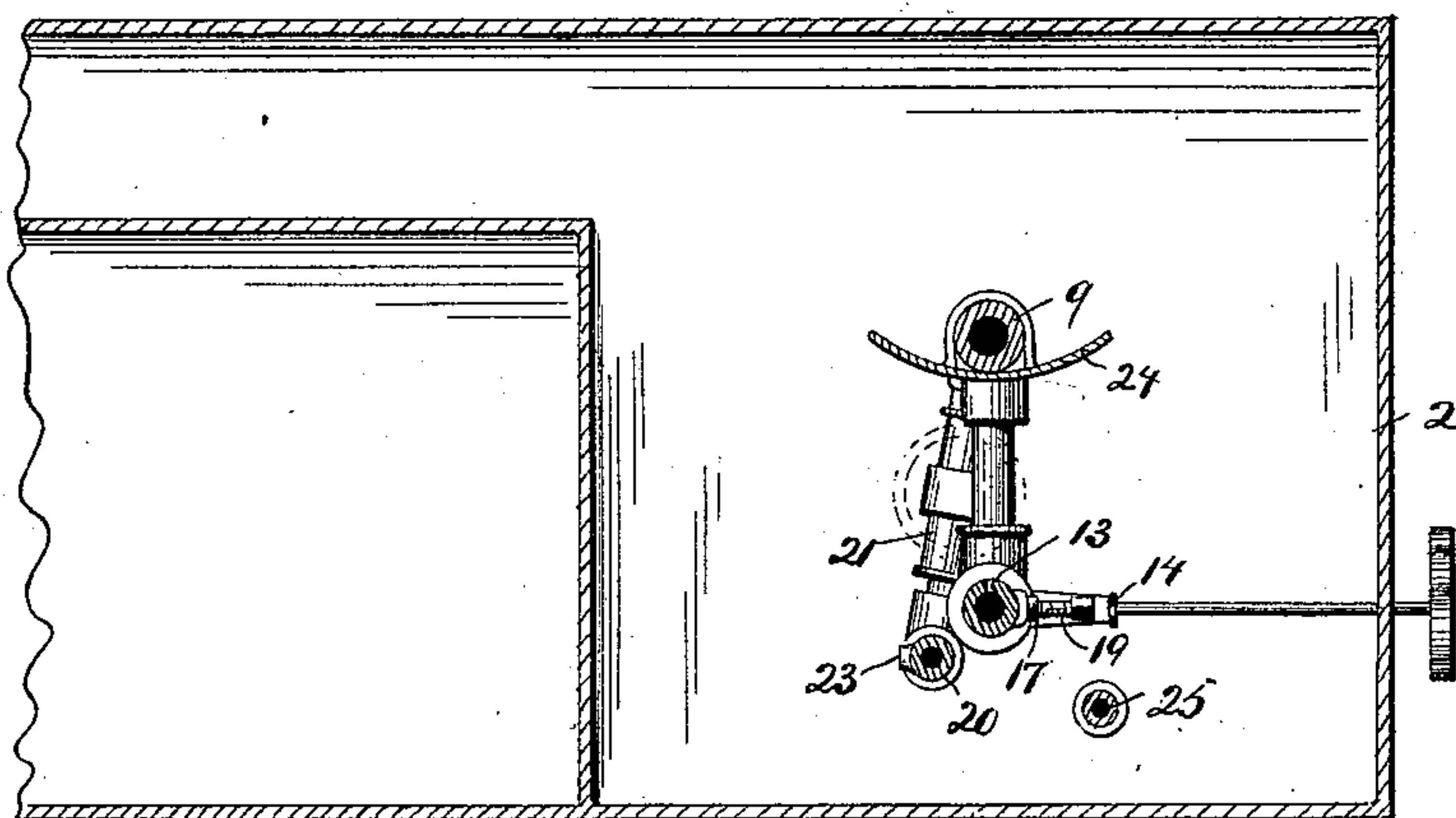


Fig. 2.

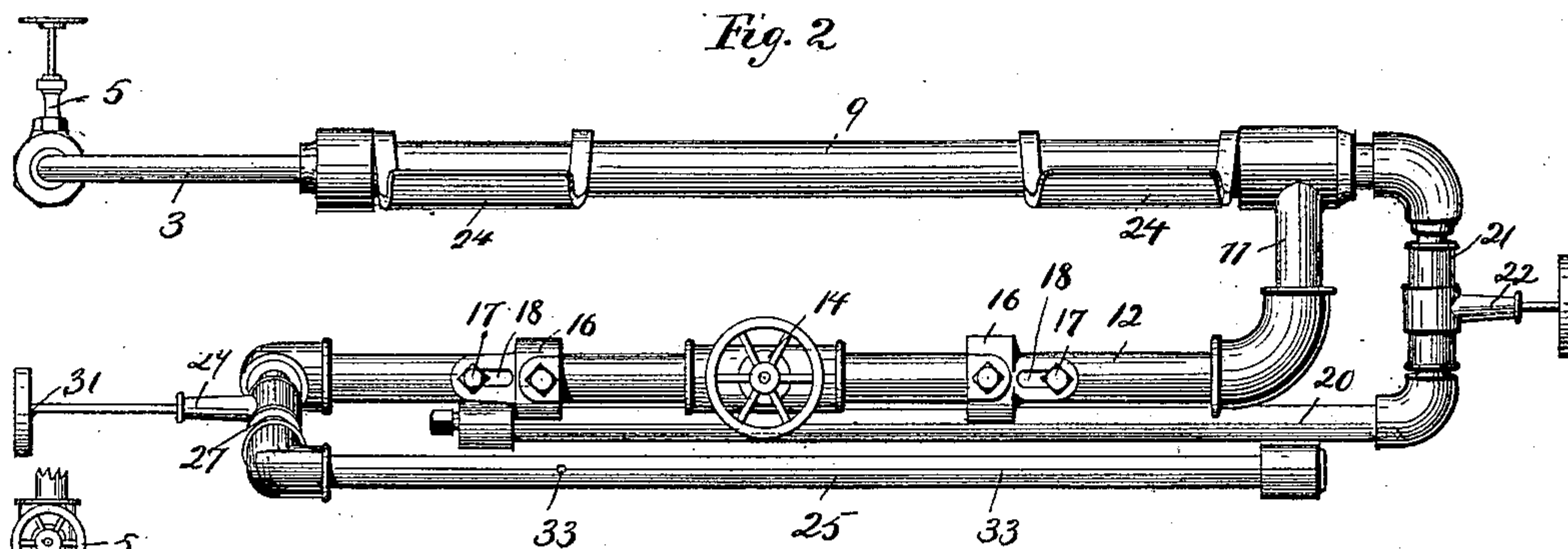


Fig. 3.

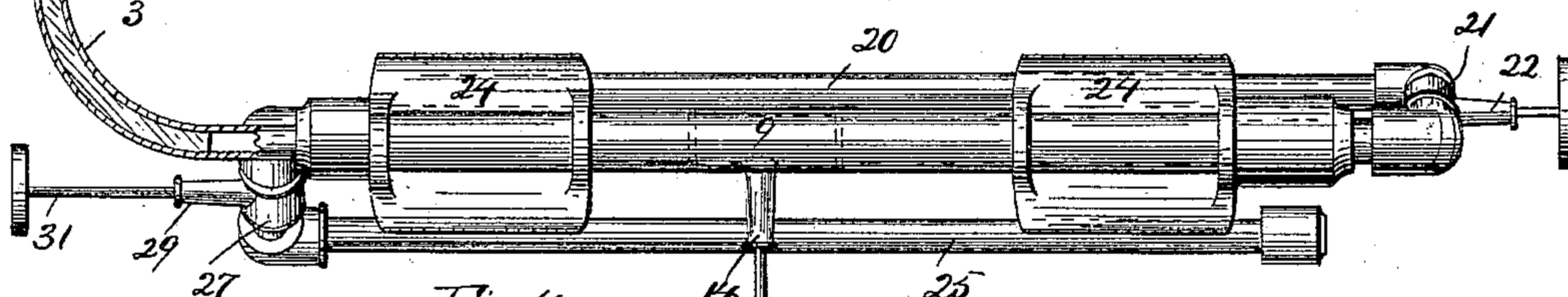
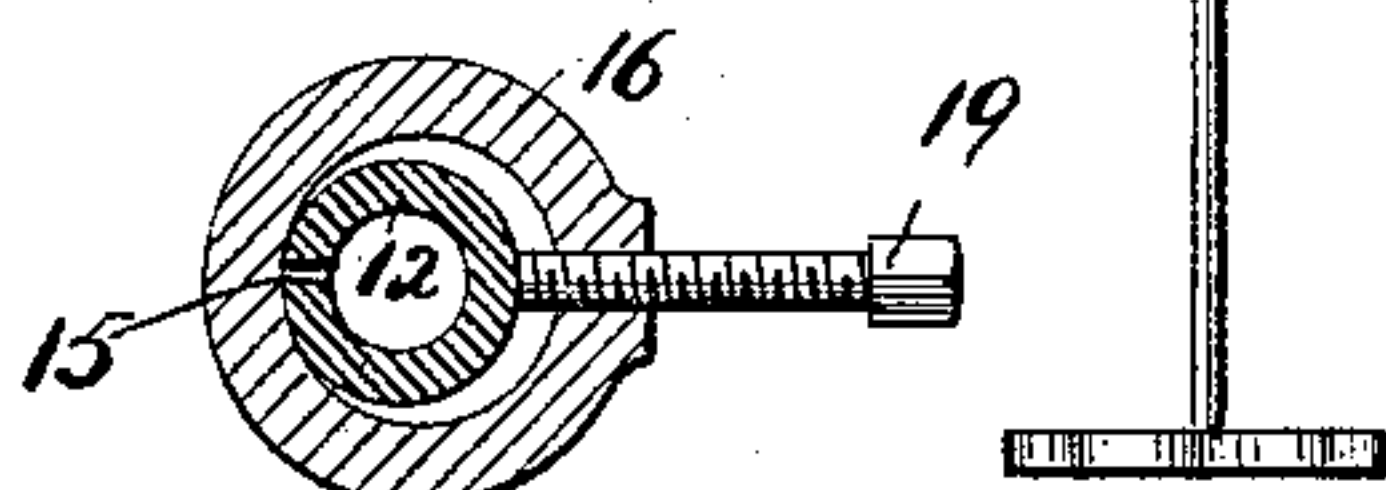


Fig. 4.



Witnesses.

J. Jensen
Richard Paul

Inventor.

Anthony L. Shore.

By Paul & Munnich

UNITED STATES PATENT OFFICE.

ANTHONY L. SHORE, OF MINNEAPOLIS, MINNESOTA.

HYDROCARBON-BURNER.

SPECIFICATION forming part of Letters Patent No. 404,442, dated June 4, 1889.

Application filed February 19, 1889. Serial No. 300,470. (No model.)

To all whom it may concern:

Be it known that I, ANTHONY L. SHORE, of Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain
5 Improvements in Hydrocarbon-Burners, of which the following is a specification.

My invention relates to improvements in burners designed particularly for burning kerosene or other liquid hydrocarbons, and
10 adapted especially for use in cooking-stoves, heating-stoves, and furnaces.

The invention consists, generally, in the construction and combination hereinafter described, and particularly pointed out in the
15 claim.

In the accompanying drawings, forming a part of this specification, Figure 1 is a transverse section of a portion of a cooking-stove, showing my device in position therein. Fig.
20 2 is a side elevation of the same. Fig. 3 is a plan. Fig. 4 is a detail section.

In the drawings, 2 represents a portion of the fire-box of an ordinary cooking-stove in which my device is preferably used.

25 3 represents the supply-pipe, through which the oil is fed to the burners. A valve 5 is preferably arranged in this pipe, and I prefer to use a packing 7, of suitable material, through which the oil passes and by which
30 its flow is regulated. The supply-pipe 3 connects with a retort-pipe 9, to the opposite end of which is connected a depending pipe 11. To the lower end of the pipe 11 is connected a horizontal burner-pipe 12, which extends
35 beneath the retort-pipe 9 and preferably in a line substantially parallel therewith. The pipe 12 is provided with openings 13 upon its upper surface, which come directly in line with the retort-pipe 9. A valve 14 is preferably
40 arranged in the pipe 12, and is provided with a handle which extends through the front of the fire-box, as shown in Fig. 1. The pipe 12 is also provided preferably with the laterally-opening jets 15, which will direct a flame
45 in a horizontal direction and against the rear wall of the fire-box, which is the front wall of the oven. I provide valves for closing the jets 15, which consist preferably of rings 16, which surround the pipe 12 and are secured

thereto by means of set-screws 17, which pass 50 through slots 18 in a projecting portion of the sleeve or ring 16. The ring 16 is also provided with a clamping-screw 19, as shown in Fig. 4. The sleeve 16 may be brought in position to cover the jet 15. The clamping-
55 screw 19 is then brought against the back side of the pipe 12, and thereby the inner portion of the ring 16 is brought closely against the surface of the pipe 12, covering the jet 15 and completely closing the same. 60
When it is desired to use the jet 15, the screw 19 is loosened and the sleeve moved along on the pipe until the jet is uncovered.

In order to provide means for quickly heating the oven, I prefer to provide an independent 65 pipe 20, which extends preferably parallel with the burner-pipe 12 and at a short distance below it. This pipe is connected to the retort-pipe 9 by the depending pipe 21, and is provided with a valve 22, which may be ar-
70 ranged with a handle outside of the fire-box. The pipe 20 is provided with jets 23 upon its rear side, which open in a horizontal direction and toward the rear wall of the fire-box. When it is desired to quickly heat the
75 oven, the valve 22 is opened and a portion of the vapor from the retort-pipe passes through this pipe 20 and escapes through the jets 23.

The vapor escaping through the openings 80 23 will be readily ignited from the jets 13. I also prefer to use the deflectors 24, which are arranged upon the retort-pipe over the jets 13.

In order to provide means for heating the water in a water-front on a stove, I prefer to 85 provide another independent pipe 25, extending preferably parallel with the burner-pipe and near the water-front. This pipe is connected with the burner-pipe 12 by the branch
90 pipe 27, which is provided with a suitable valve 29, having a suitable handle 31 extending outward through the fire-box, by which it may be operated. This pipe 25 is provided with suitable horizontal jets 33, of any de-
95 sired number, through which the vapor escapes when admitted to the pipe from the pipe 12, for the purpose of heating the water.

I claim as my invention—

The combination, with the retort-pipe 9, of the burner-pipe 12, extending beneath said retort-pipe, and provided upon its upper surface with the jets 13 and with the jets 15, of
5 the rings or sleeves 16, arranged upon said pipe 12 and adapted to close said jets 15, and provided with the clamping-screws 19, substantially as described.

In testimony whereof I have hereunto set my hand this 13th day of February, 1889.

ANTHONY L. SHORE.

Witnesses:

A. M. GASKILL,
A. C. PAUL.