

(No Model.)

P. G. VAN WIE.  
BURNER FOR GAS STOVES.

No. 559,236.

Patented Apr. 28, 1896.

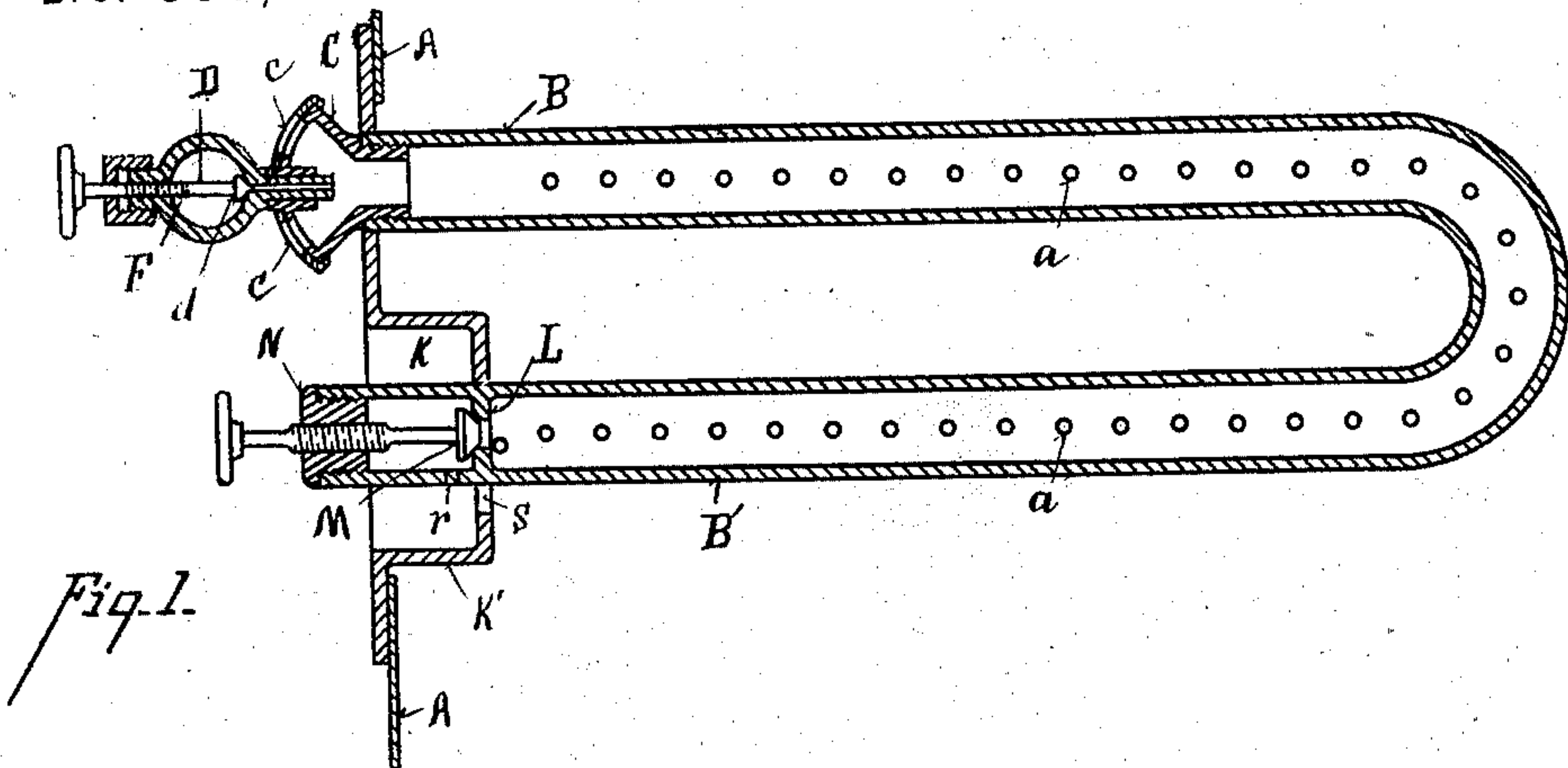


Fig. 1.

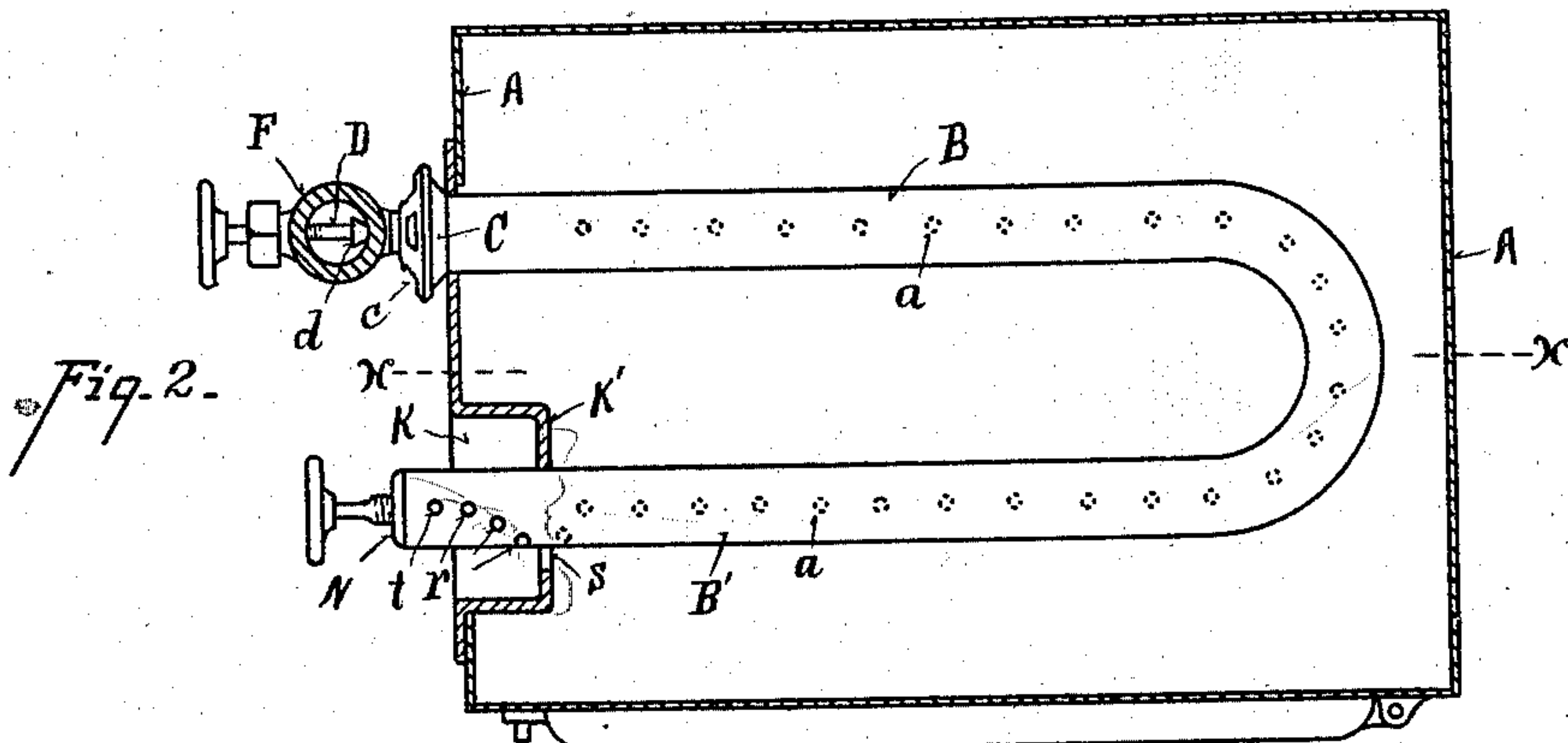


Fig. 2.

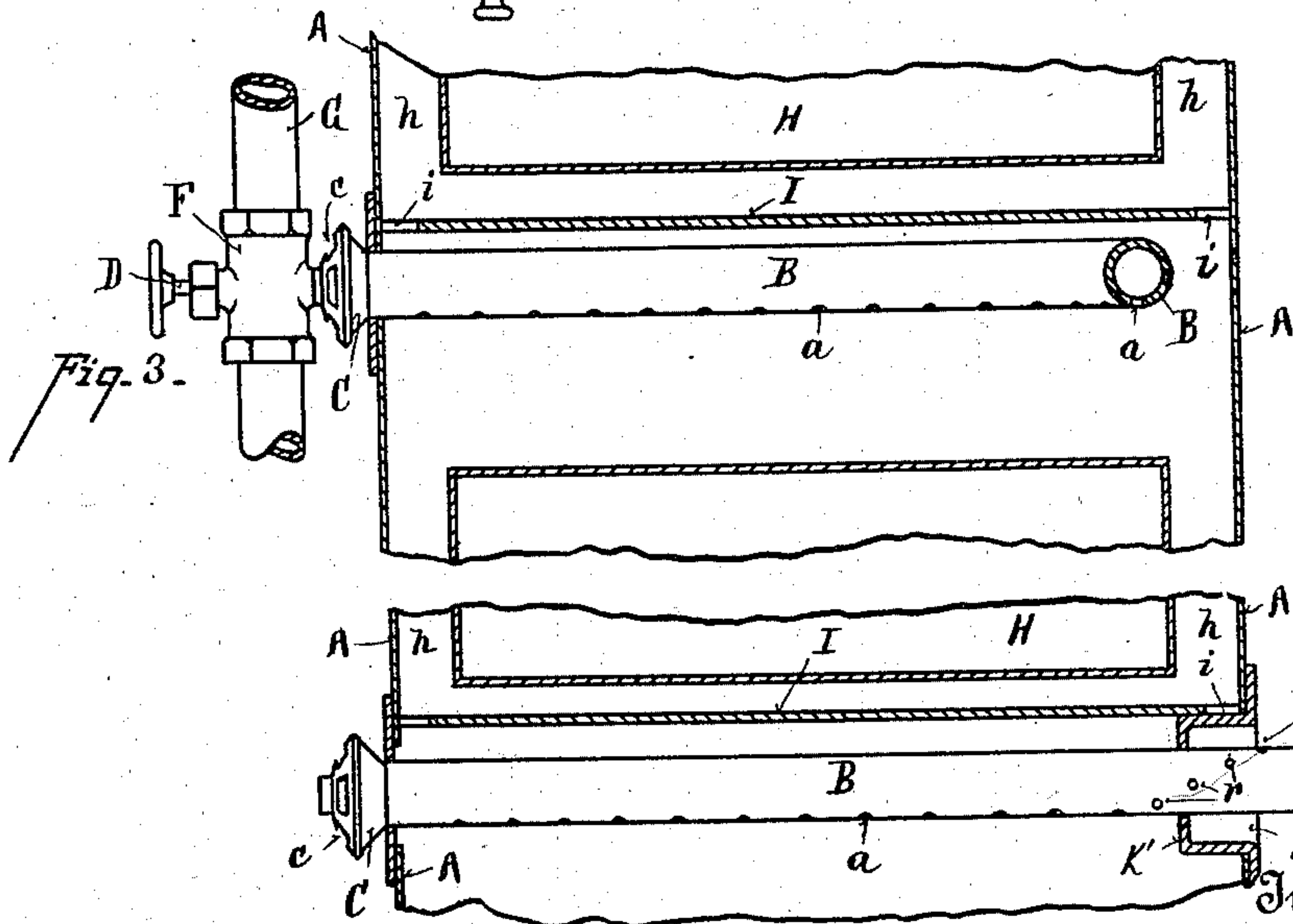


Fig. 3.

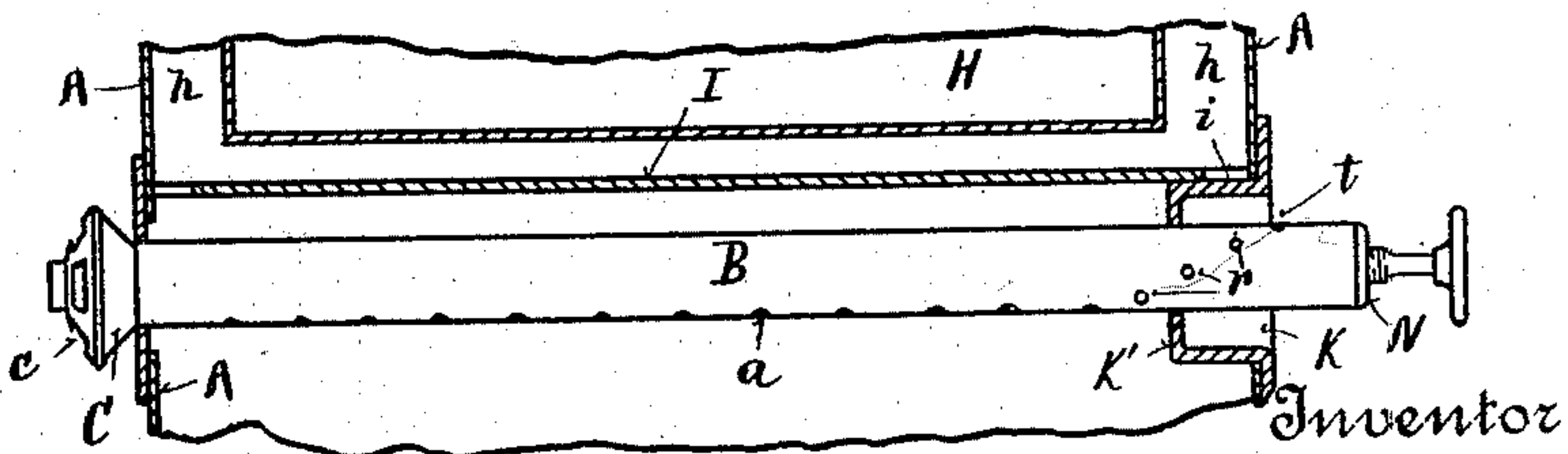


Fig. 4.

Witnesses

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# UNITED STATES PATENT OFFICE.

PETER G. VAN WIE, OF PIQUA, OHIO, ASSIGNOR TO THE FAVORITE STOVE  
AND RANGE COMPANY, OF SAME PLACE.

## BURNER FOR GAS-STOVES.

SPECIFICATION forming part of Letters Patent No. 559,236, dated April 28, 1896.

Application filed October 26, 1894. Serial No. 527,055. (No model.)

*To all whom it may concern:*

Be it known that I, PETER G. VAN WIE, residing at Piqua, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Burners for Gas-Stoves, of which the following is a specification.

This invention has for its object to provide new and improved means for facilitating the lighting of the burners used in gas-stoves in such manner that the burner will not light back or ignite at the valve-orifice where the gas and air enter.

To accomplish this object my invention consists in the features of construction and the combination or arrangement of parts hereinafter described and claimed, reference being made to the accompanying drawings, in which—

Figure 1 is a central horizontal sectional view of the burner and its attachments. Fig. 2 is a plan view of the same, partly in section, located in position under the oven. Fig. 3 is a section on line *x x*, Fig. 2. Fig. 4 is an elevation of a modification of the burner shown in Fig. 1.

A represents the side plates of the stove.

B represents the burner, which in the preferred form of construction is two-limbed.

C represents the air-mixer; *c*, the air-register.

D represents a valve-stem; *d*, the valve located in the sleeve F of the gas-supply pipe G.

*a* represents the apertures in the pipe or burner B. This pipe is usually located below the oven H, as shown in Fig. 3.

*h* represents flues around the oven, and *i* the apertures in the plate I, through which the products of combustion pass into the flues *h*.

In the preferred form of construction one limb B' of the burner passes outside of the stove and is provided with one or more outside apertures *t*. A series of burner-apertures *r* is provided, which continue at suitable intervals, so that the inner burner *r* in the recess K can communicate the flame to the first burner within the oven. Preferably these apertures *t r* are placed at the top and extend spirally around until they arrive at the under side of the pipe, as in the stoves ordinarily constructed.

It is desired to have two ovens, one a broiling-oven, which is heated by the direct projection of the flame of the burner downward, while the other oven, H, is heated by radiation and circulation.

In order that the flame of the lighting-orifice may be extinguished after the burner has been lighted, I provide the following instrumentalities: K represents a recess formed around the limb B'. L represents a diaphragm in the pipe B'. It is provided with a valve-seat against which the valve M seats. This valve is mounted upon a stem that is threaded in the cap N. When this valve is closed, the gas is prevented from passing the diaphragm L and only the apertures inside of the oven are in use, the apertures *t r* being cut out by the valve M.

It will be observed that the recess K is closed, except upon its front side, and will tend to cage or hold the gas, so that it may be readily lighted by placing the match or torch anywhere in front of said recess, and the gas inside the recess will ignite the burner. This recess is at the extreme end of the burner and is extended into the oven.

The gas and air have been properly mixed before they arrive at this point, and there is no danger of explosion by lighting the burner-orifice or lighting the gas within the recess; but the principal feature of my invention is the providing of two or more limb-burners with means for lighting the burner-limb which is farthest from the supply device.

I do not wish to limit myself to the extending apertures within the recess K, except where the same are made a specific element of the claims, as the burner may be lighted through the apertures *s* or by opening the door, which is the usual form of lighting.

Mode of operation: The valve D is opened to allow the gas to pass into the air-mixer C. The register *c* is adjusted, so as to admit the required amount of air to support the proper combustion. The mingled air and gas pass through the limb B', when the valve M is opened and the gas extends to the end of the pipe. The operator lights the gas at the aperture *t*, the next aperture will light from that, and so on, the entire series being almost in-



stantly lighted. Then the valve M is closed. If the attendant desires to ascertain the condition of the burners inside of the oven, by opening the valve M the burners *t r* will be  
 5 lighted from the burners inside of the oven. If they are not so lighted, the attendant knows that the burners are not ignited inside of the oven.

It will be seen that the burner herein de-  
 10 scribed contains features that are very important. One end of the burner-pipe is what might be termed a "dead end," but it may be converted into a visible active burner by open-  
 15 ing the valve M, and I believe I am the first to construct a burner that is permanently extended into a recess on the outside of the stove containing visible lighting-apertures which can be cut in or out at any time.

I claim—

20 1. The combination with the fire-chamber of a stove of a two-limbed burner-pipe one end of which is provided with air and gas supply and mixing devices, a series of burner-apertures arranged along the limbs of said pipe, the ter-  
 25 minal end of said burner being located in a recess formed in the walls of the stove, and a lighting-aperture within the said recess connecting with the burner-aperture of the terminal limb of the pipe, substantially as speci-  
 30 fied.

2. In a gas-stove a burner-pipe having two limbs one end being provided with air and gas supply and mixing devices the other end ex-  
 35 tending through the walls of the stove and terminating in a recess formed by the inward extension of the stove-walls, one or more apertures in the burner-pipe within the recess and an aperture in the walls of the recess

communicating with the burner-aperture in-  
 side of the stove, substantially as specified. 40

3. In a gas-stove a plural-limbed burner provided with burner-apertures along its said limbs, said burner having at one end devices for supplying and mixing air and gas, its ter-  
 45 minal end supported in a recess, an aperture in said recess opposite the burner-apertures, one or more lighting-apertures in the recess and a valve seated in the pipe between the outside aperture and the burner-aperture, substantially as specified. 50

4. In a gas-stove a two-limbed burner provided throughout its length with a series of burner-apertures having at one end devices for the supplying and mixing of air and gas, its terminal end supported in a recess formed  
 55 by the walls of the stove provided with an ignition-jet, an aperture in the recess communicating with the burner within the stove, and means for cutting out the lighting-aperture located within the recess of the stove, 60 substantially as specified.

5. In a gas-stove, a burner provided throughout its length with a series of burner-apertures and having at one end devices for the supply and mixture of air and gas, and in its other  
 65 end a perforated partition and a series of igniting-apertures in the outer portion of the burner-pipe beyond said partition, and a valve located in the pipe to control the openings in said partition, substantially as specified. 70

In testimony whereof I have hereunto set my hand.

PETER G. VAN WIE.

Witnesses:

W. R. WOOD,  
 STANHOPE BOAL.