G. R. GLEASON.

GAS HEATERS FOR SOLDERING IRONS.

No. 189,724. Patented April 17, 1877.

Fig.1.

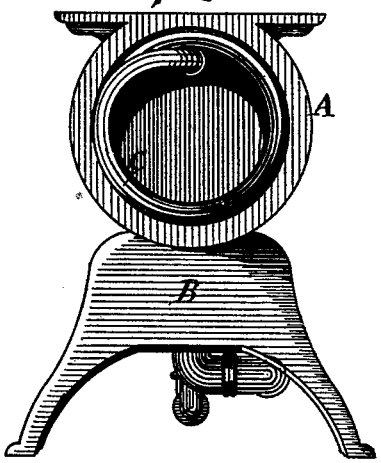


Fig.2.

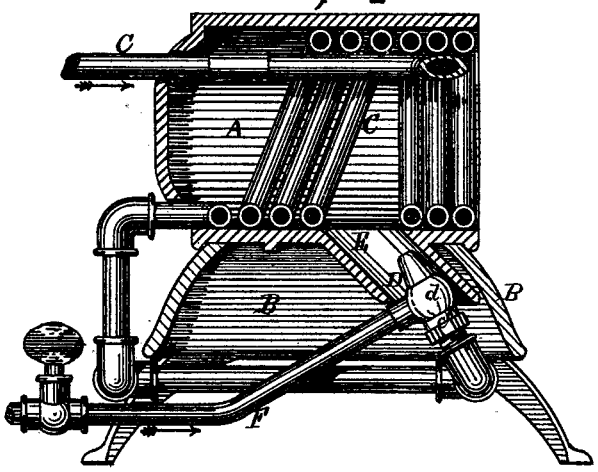
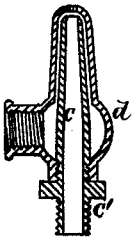


Fig.3.



Witnesses

Forde R. Smith

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UNITED STATES PATENT OFFICE.

GEORGE R. GLEASON, OF CHICAGO, ILLINOIS, ASSIGNOR TO WILSON PACKING COMPANY.

IMPROVEMENT IN GAS-HEATERS FOR SOLDERING-IRONS.

Specification forming part of Letters Patent No. **189,724**, dated April 17, 1877; application filed March 7, 1877.

To all whom it may concern:

Be it known that I, GEORGE R. GLEASON, of Chicago, in the county of Cook and State of Illinois, have invented certain Improvements in Gas-Heaters for Soldering-Irons, of which the following is a specification:

In the accompanying drawing, forming a part of this specification, Figure 1 is a front view of my improved heater, and Fig. 2 is a central vertical section thereof, while Fig. 3 is a view in section of the burner used therein, like letters of reference indicating like parts in all the figures.

In said drawing, A represents the cylinder wherein the heating is done. It is closed at one end, open at the other, and supported on a stand, B. Inside this cylinder is placed a coil of pipe, C, one end of which enters at the top of the closed end, and passes out at the bottom of the same end, from whence it is continued with suitable connections until it unites with the burner D placed in the mouth of a diagonal chute, E, opening from out the bottom of the heating-cylinder. Into this pipe C a blast of air is introduced at its upper end, which follows, of course, the pipe in its windings, and thus receives heat therefrom and before it reaches the flame at the burner becomes highly charged therewith. In this way it is ripened for its office of assisting the combustion at the burner, and much heat which would otherwise be lost is made available. The coil is separated, as shown in the drawing, to permit the entrance of the flame into the heating-chamber.

Gas is admitted to the burner through the pipe F.

The burner is peculiarly constructed. It is made with an outer shell, *d*, into which the gas is admitted. The pipe C is provided with a nozzle, *c*, at this end, jointed thereto by a screw-joint in the usual manner. This nozzle is inserted within the shell *d*, and its orifice is directly under the orifice of the shell. A nut-collar, *c'*, surrounds this nozzle, which is screw-threaded immediately above the collar for the securing of the shell *d*, and below the same for connection with the pipe C, one of such threads being right and the other left. This enables me to gage the opening between the nozzle and the inside of the shell *d*, and thereby the consumption of gas by turning the nut to the right or left, as desired, the upper end of the nozzle fitting the shell sufficiently close to permit this result.

The burner is so sheltered by the incline of the chute E as to obviate any danger of solder falling from the irons being heated coming in contact therewith.

The burner, it will be noticed, is provided with such joints in the air and gas pipes as to permit a wide range of adjustment, whereby I am enabled to direct the flame in several directions.

What I claim as new is—

1. The heating cylinder or chamber A, provided with a coiled pipe, C, one end of which communicates with a heating apparatus, and the other end open for the admission of cold air, substantially as set forth.

2. The combination of the stand B, pipe F, with burner D, the inclined chute E, and the cylinder A, having coiled pipe C, all substantially as set forth.

3. The nozzle *c*, provided with a nut, and threaded above and below the same, as shown, in combination with the shell *d* and pipe C, substantially as set forth.

4. The combination, with the burner, of the air-pipe C and gas-pipe F, substantially as specified.

5. The combination, with the chute E, of the burner C, when the chute is so inclined as to shelter the burner from the dripping solder, substantially as set forth.

GEORGE R. GLEASON.

Witnesses:

EMMETT MATHER,

JOHN G. LESTON.