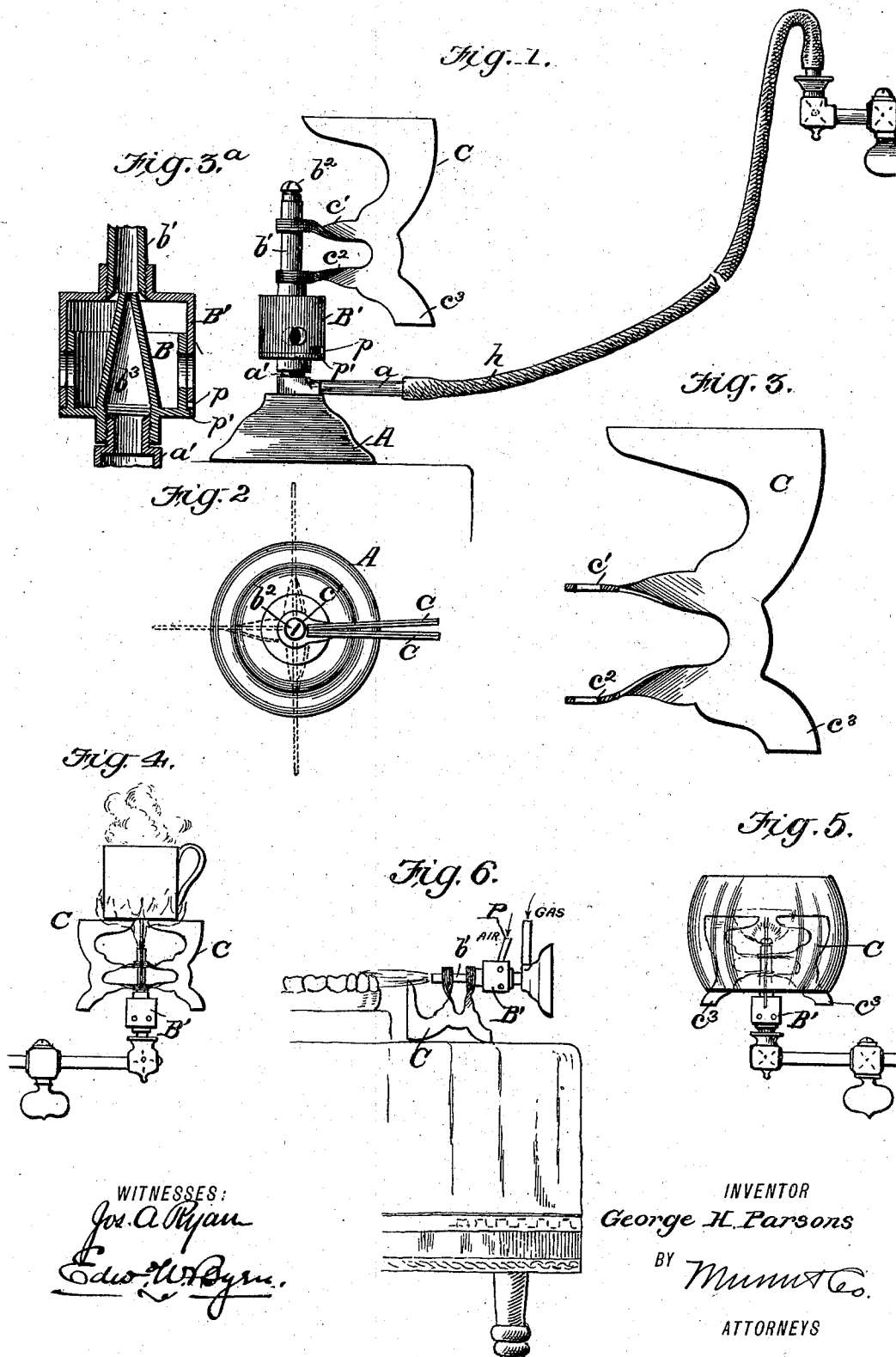


(No Model.)

G. H. PARSONS.
GAS BURNER.

No. 559,201.

Patented Apr. 28, 1896.



UNITED STATES PATENT OFFICE.

GEORGE H. PARSONS, OF ST. LOUIS, MISSOURI.

GAS-BURNER.

SPECIFICATION forming part of Letters Patent No. 559,201, dated April 28, 1896.

Application filed December 4, 1895. Serial No. 571,078. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. PARSONS, residing at St. Louis, in the State of Missouri, have invented a new and useful Improvement in Gas-Burners, of which the following is a specification.

The object of my invention is to provide a gas-burner which may be adjusted so as to furnish a blue flame with an intense heat and no smoke, after the manner of a Bunsen burner, or be adjusted so as to furnish a light for illuminating purposes, as may be desired, and which is designed also to support a cup or receptacle for heating liquid or to receive a glass globe, as may be desired.

My invention consists in the special construction and arrangement of the burner, in combination with the cup or globe holder, as hereinafter fully described.

Figure 1 is a side view of the device as sustained upon a stand or basic support and connected by a flexible pipe with a gas-bracket, the parts being adjusted for illumination. Fig. 2 is a plan view of the device as adjusted in Fig. 1 for giving light and showing in dotted lines the opened or expanded arrangement of the cup or globe holder. Fig. 3 is an enlarged detail side view of one of the leaves of the cup or globe holder. Fig. 3^a is a sectional detail of the mixing-chamber. Fig. 4 is a side view of the device, on a small scale, screwed directly upon the end of the gas-bracket, showing the application of a cup or receptacle for heating water or other liquid. Fig. 5 is a similar side view, on the same reduced scale, showing the application of a glass globe to the burner. Fig. 6 shows the burner when used as a blowpipe.

In the drawing Fig. 1, A represents a base-plate, having a pipe connection *a* for a flexible-rubber hose *h*, adapted to connect with a gas-burner or any suitable supply. This base-plate is provided with a central nipple *a'*, onto which is screwed an enlarged mixing-chamber B, in which the air and gas are mixed when a high heat and blue flame are required. Around the exterior of chamber B there is fitted with a gas-tight ground joint a sleeve B', which connects with tube *b'* and with it is removable from chamber B. This sleeve has openings in it corresponding in number and size with a similar set of openings in the side

and is limited in its rotary adjustment by a stop-pin *p* and slot *p'*. When the sleeve B' is turned to throw the two sets of openings into registration, air is admitted into the interior of chamber B to burn the gas with a blue flame, and when the sleeve is turned to the other position this supply of air is cut off and the gas then burns with a bright flame. The lower portion of the chamber B is formed with a screw-threaded socket adapted to fit upon and connect with the nipple *a'* of the base or the threaded end of any bracket or pipe connection, and extending upwardly from the bottom of the chamber and cast therewith is a hollow stem or tube *b³* of reduced size, which is arranged in concentric relation to the screw-threaded outlet at the top of the sleeve B'. Into this outlet is screwed a metal tube *b'*, the upper end of which is adapted to receive a lava tip *b³* when the gas is used for giving light, but which is removed when the device is adjusted as a Bunsen burner.

In pointing out the novel features of my burner I would state that I am aware that it is not new to have a gas-nozzle projecting upwardly into an air-chamber which is fixed to the main burner-tube above, which air-chamber has holes in its sides and is embraced by a separate swiveling collar or sleeve similarly perforated. My burner has its inner wall B formed integrally with the gas-nozzle *b³* and detached from the main burner-tube *b'* above, while the main burner-tube *b'* is fixed to and moves with the outer casing B' and with the latter is removable from the parts B and *b³*.

C is a holder for a cup, pan, or other receptacle, as shown in Fig. 4, or for sustaining a globe, as in Fig. 5. This holder is composed of four, more or less, leaves of equal size and shape, each of which has (see Fig. 3) two arms *c'* *c²* and an outwardly and downwardly projecting foot *c³*. These leaves are stamped out of sheet metal, and the arms *c'* *c²* are twisted a quarter of a revolution, so that the ends of the arms are at right angles to the plane of the body portion of the leaf. These ends of the arms are perforated with holes adapted to receive the burner-stem *b'*, about which they are hinged as a pintle and around which they are adapted to swing, so as to be folded all to one side, as in Fig. 1, as when it is desired to expose the illuminating-flame or be

distributed at equal spaces around the burner, as in Figs. 2, 4, and 5, when it is intended that they shall support something.

The advantages of the peculiar construction of the leaves C are that they are all cheaply cut by the same die, the twisting of the arms $c' c^2$ serving to not only allow them to encircle the burner-tube by having simply a perforation formed in their ends, but also permitting these arms $c' c^2$ of the different leaves to lie flat against and adjust themselves to each other when fitted around the burner-tube. When these leaves are disposed as in Fig. 4, they form a convenient stove for heating water for bath-rooms or the nursery, or for shaving, brewing punch, and a multitude of other uses. These leaves also form a convenient support for a glass globe, as in Fig. 5. When they are so used, the leaves are all turned to one side, as in Fig. 1, until the small opening in the globe is passed over them, and then they are expanded, as in Fig. 5, in which position the lower edge of the globe rests upon the outer edges of the feet c^3 .

A common gas-burner burns five feet of gas in one hour. My burner burns four feet in one hour, and the chamber acts as a reservoir to equalize the pressure. The burner is handy and convenient in the dental laboratory for soldering investments, for making bridge-work, or for drying out flasks, or for sterilizing instruments. It is also a fine thing for people that are traveling, as it can be carried in the gripsack and attached to any gas-burner in hotels. It is also handy for sick people. The glass globe can be left on all the time, if desired, and if it is wanted to heat anything all that is necessary is to take out

the burner and turn the collar and you will then have it adjusted for heat.

The burner may also be turned into a horizontal position, as shown in Fig. 6, and operated by an air-blast through a pipe P to act as a blowpipe in soldering teeth in the dental laboratory or for other use.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The gas-burner herein described consisting of an inner wall B with openings in its side and concentric upwardly-projecting gas-nozzle b^3 , formed in one piece with said wall and having a screw-threaded lower end to connect with a gas-supply pipe; in combination with an outer casing B' having openings in its side adapted to register with those in the inner wall, and a burner-tube b' detached from the inner wall and permanently connected to the outer casing, and with it adjustable on and removable from the inner wall, and stops for determining its rotary adjustment, substantially as shown and described.

2. A support for holding utensils &c. above a gas-burner, consisting of a set of flat leaves each made alike with two projecting arms $c' c^2$ twisted or turned through a quarter of a circle to bring their ends into a plane at right angles to that of the body of the leaf, and perforated to embrace the burner substantially as and for the purpose described.

GEORGE H. PARSONS.

Witnesses:

Mrs. D. J. FOLEY,
ELLA HALEY.