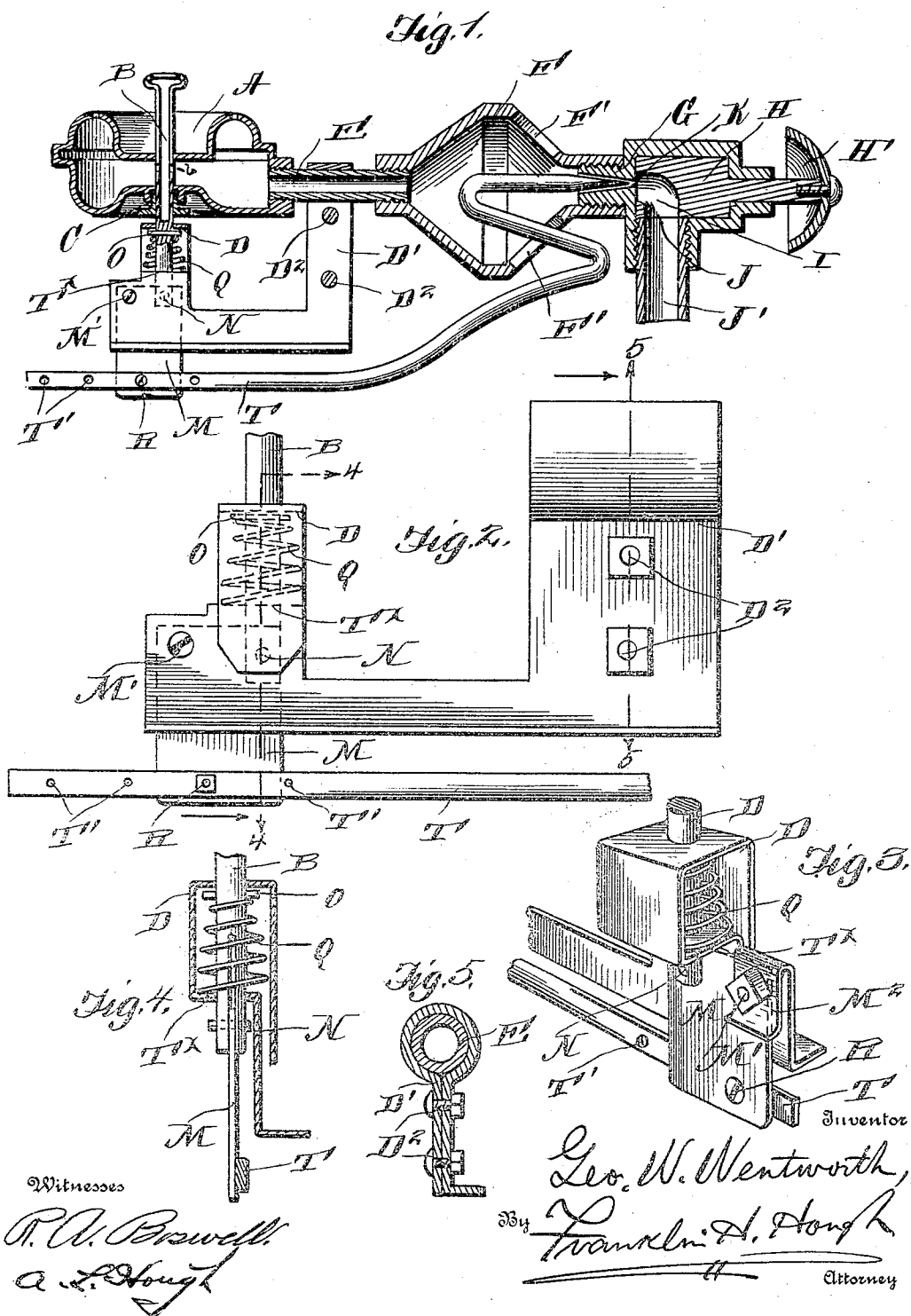


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PATENTED JUNE 13, 1905.

G. W. WENTWORTH.
AUTOMATIC GAS REGULATING APPARATUS.

APPLICATION FILED JAN. 31, 1905.



UNITED STATES PATENT OFFICE.

GEORGE W. WENTWORTH, OF MINNEAPOLIS, MINNESOTA.

AUTOMATIC GAS-REGULATING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 792,096, dated June 13, 1905.

Application filed January 31, 1905. Serial No. 243,507.

To all whom it may concern:

Be it known that I, GEORGE W. WENTWORTH, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented certain new and useful Improvements in Automatic Gas-Regulating Apparatus; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in automatic gas cut-offs for gas-burners of ranges and hot plates; and the object of the invention is to produce a simple and efficient device of this character whereby the flow of gas to a burner can be automatically regulated by the weight of an article resting upon the burner.

The invention consists in various details of construction and in combinations and arrangements of parts, which will be hereinafter fully described and then specifically defined in the appended claim.

My invention is illustrated in the accompanying drawings, which, with the letters of reference marked thereon, form a part of this application, and in which drawings—

Figure 1 is a vertical sectional view through a burner, showing my apparatus as applied thereto. Fig. 2 is an enlarged detail view and elevation of a part of the apparatus. Fig. 3 is a perspective view showing the manner in which the spring-pressed rod is mounted for actuating the gas-valve. Fig. 4 is a sectional view on line 4 4 of Fig. 2, and Fig. 5 is a sectional view on line 5 5 of Fig. 2.

Reference now being had to the details of the drawings by letter, A designates a burner of the usual construction having a central aperture, through which the yielding tube B is mounted. Said tube passes through a suitable gland C and passes also through an aperture in a yoke D, which yoke has a shank portion D', fastened about the pipe E, leading to the burner, as shown clearly in the drawings. One arm of the shank portion D

is flexible and adapted so that it may be readily attached to the pipe and is held in clamping relation by means of adjusting-screws D², as shown clearly in Fig. 5 of the drawings.

F designates an air-mixing chamber, which has apertures F' therein for the reception of air, and a valve-casing G is fitted to the yoke of said air-chamber and contains a plug H, having a hand-wheel H' fixed to the stem thereof, whereby said plug may be turned in one direction or the other for the purpose of driving the recessed portion I thereof into registration with the opening J of the pipe J' and with the tapering aperture K, which leads through the threaded portion of the chamber G. The yielding tube B has a pin O passing through the same, which limits the upper movement of said tube as the said pin contacts with the top of the yoke. A spring Q is interposed between the top of said yoke and the transversely-disposed portion thereof, (designated in the drawings by letter T^x), as shown clearly in Fig. 3, the object of the spring being to normally hold the tube B at its highest position. The lower end of said tube B is split and carries a pin N, which passes through a plate M, pivoted upon a screw M', which is mounted upon an inverted-hook-shaped portion M² of the yoke, as shown in the perspective view of Fig. 3 of the drawings. It will be observed that the tube B has apertures b therein, affording adjustment with the latter and through which apertures the pin O may pass.

The lower swinging end of the plate M carries a bolt R, which is adjustably held to the rod T, which has adjusting-apertures T' therein. Said rod has a portion thereof bent in substantially an S shape, which bent portion extends through an aperture in the air-mixing chamber, and the extreme free end of said rod is pointed and is positioned in the tapering opening K, leading through into the valve-chamber in which the valve-plug H is mounted.

The operation of my apparatus is as follows: The valve-plug H being turned so that gas may enter the air-mixing chamber and passing from thence to the burner after being mixed with a suitable quantity of air in said chamber as the gas is lighted in the burner,

it being desired to increase the intensity of the flame, the tube B is depressed, which would be the case if a dish or receptacle of any kind were placed upon the same, and by the depression of the tube the plate M will rock upon its pivotal point M' and the pin of the rod T will be withdrawn from the tapering aperture leading from the valve-casing G, which will allow the gas to flow more freely to the burner. As the weight is removed from the upper end of the tube B the point of the rod T will return to its normal position, which will cause the supply of gas to be shut off, or partially so.

From the foregoing it will be observed that a simple and efficient apparatus is provided which may be readily applied to gas-burners of ranges and hot plates in such a manner that the supply of gas fed to the burners may be automatically regulated and affording means which may be easily and quickly applied to or removed from a burner.

While I have shown a particular form of apparatus illustrating my invention, it will be understood that I may vary the details of the same, if desired, without in any way departing from the spirit of the invention.

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

An automatic gas cut-off for ranges, &c., comprising in combination with a burner and depressible member mounted therein, a valve-plug with tapering aperture therein, a yoke having a shank portion supported from the burner, a portion of said yoke being bent to form parallel portions which are apertured and through which said depressible member extends, a pin carried by said depressible member, a spring seated upon a portion of said yoke and bearing against said pin, a swinging plate mounted upon the yoke and having pivotal connection with said depressible member, a valve-point having a shank portion which is apertured and having adjustable pivotal connection with said plate, as shown and described.

In testimony whereof I hereunto affix my signature in presence of two witnesses.

GEORGE W. WENTWORTH.

Witnesses:

EDWARD SAVAGE,

HERBERT G. RICHARDSON.