

(No Model.)

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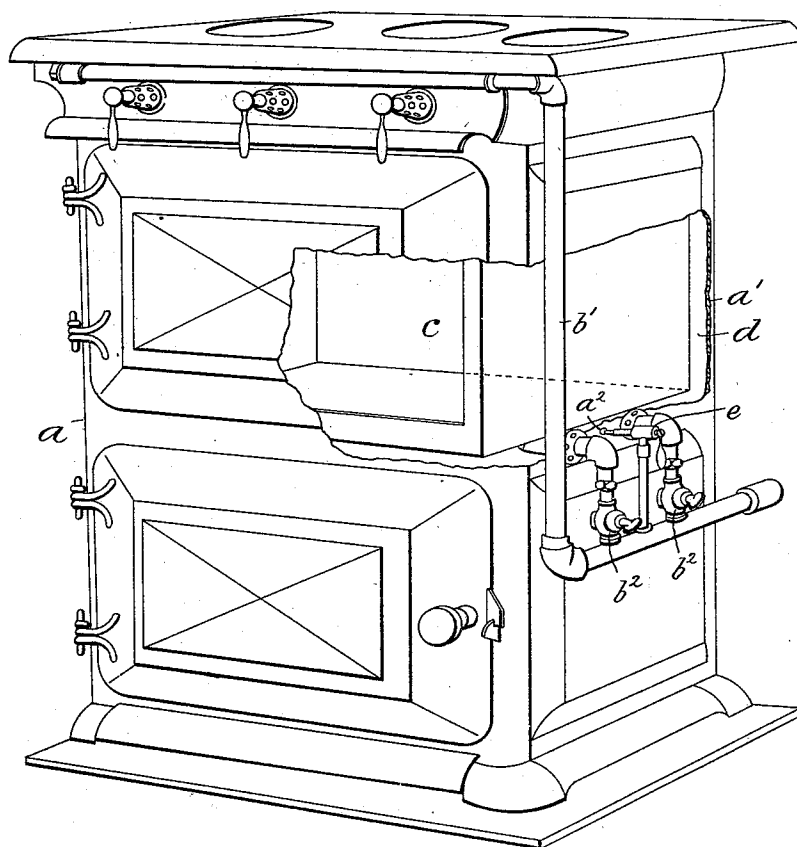
C. H. PAGE, Jr.

MEANS FOR LIGHTING GAS RANGES, HEATERS, &c.

No. 521,915.

Patented June 26, 1894.

Fig. 1.



WITNESSES:

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(No Model.)

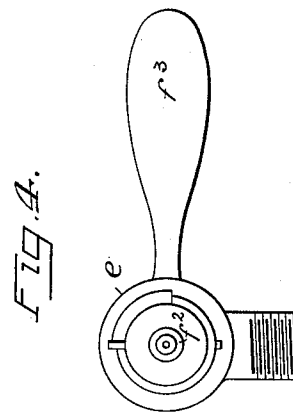
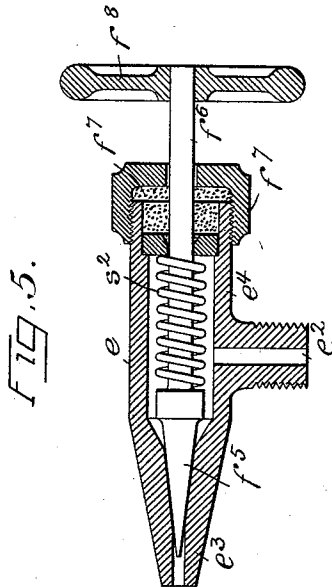
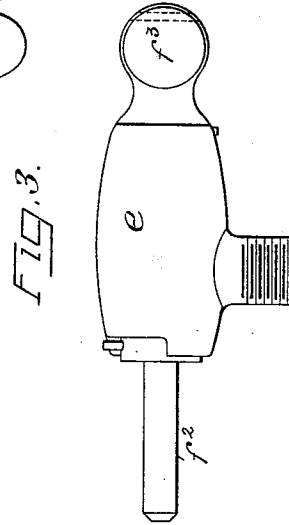
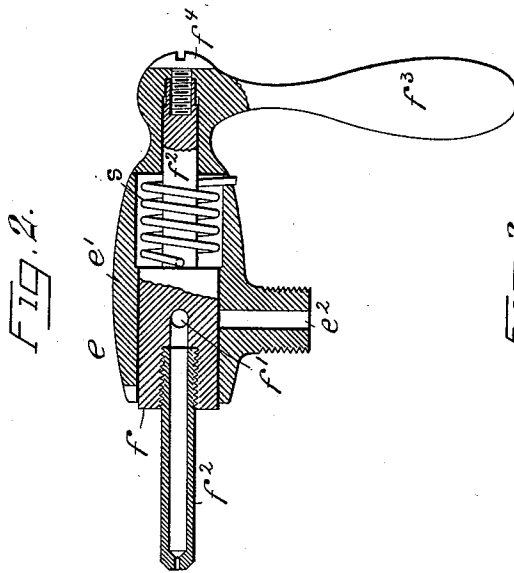
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

CARTER H. PAGE, JR., OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE UNITED GAS IMPROVEMENT COMPANY, OF SAME PLACE.

MEANS FOR LIGHTING GAS RANGES, HEATERS, &c.

SPECIFICATION forming part of Letters Patent No. 521,915, dated June 26, 1894.

Application filed September 25, 1893. Serial No. 486,899. (No model.)

To all whom it may concern:

Be it known that I, CARTER H. PAGE, JR., a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and Improved Means for Lighting Gas Ranges, Heaters, &c., of which the following is a specification.

It is well-known that the burners of many types of gas ranges, heaters, and similar apparatus, are located in such positions as that access cannot be readily had for lighting them; consequently the employment of a jet burner for this purpose has been suggested. Hitherto the practical employment of such jet burners was attended with several disadvantages features which precluded their use. For example, in order to project a burning gas jet, it is necessary to use pure gas, that is gas unmixed with air, and a jet burner supplied with such gas will, if left burning for any considerable length of time, cause a deposition of carbonaceous matter, which not only exudes a disagreeable odor but also collects in the flues and passages of the range, heater, or other apparatus.

The principal objects of my present invention are, first; to obviate the above mentioned defects and disadvantages and to provide a gas range, heater, or the like, with a lighting jet that will not in use, permit of the deposition of carbon and its consequent disadvantages, and second; to provide simple, durable, and reliable means for lighting gas ranges, heaters, &c.

In my invention, use is made of a jet-burner provided with a spring controlled plug or valve tending to cut off the supply of gas and extinguish the jet and adapted to be maintained manually in position for permitting of the temporary projection of a lighted or burning jet into proximity with the burner of a gas range, heater, or similar apparatus.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description taken in connection with the accompanying drawings forming part hereof, and in which—

Figure 1, is a perspective view partly in section illustrating a gas range having my improved lighting means applied thereto.

Fig. 2, is a central sectional view drawn to an enlarged scale and illustrating the jet burner shown in Fig. 1, and also its spring controlled plug or valve. Fig. 3, is a side elevational view of the device illustrated in Fig. 2, showing the operating handle thereof turned into open and unstable position. Fig. 4, is an elevational view of the right-hand end of Fig. 3, and Fig. 5, is a transverse sectional view illustrating a jet burner embodying a modified form of spring controlled valve or plug.

In the drawings, *a*, is a gas range provided with a burner *b*, and with an oven *c*, having between its walls and the casing *a'*, of the range, passages *d*, for conveying the products of combustion from the burner *b*, to the off-take of the range.

e, is a jet burner in communication with the gas supply pipe *b'*, and disposed opposite an opening or aperture *a²*, in the casing *a'*, of the range; so that a lighted jet may be projected from the jet burner *e*, through the aperture *a²*, into proximity with the burner *b*, in order to light the same. However if the jet-burner *e*, were permitted to continue to burn for any considerable length of time, carbonaceous matter would be deposited upon the bottom of the oven *c*, and in the flues or passages *d*, and would thus not only prevent the free egress of the products of combustion from the burner *b*, but also give rise to an unpleasant odor. To prevent these disadvantageous features, and insure the automatic turning off or extinguishment of the jet-burner *e*, as soon as the burner *b*, has been lighted, use is made of a spring controlled valve or plug tending to close the jet-burner *e*, and temporarily restrained from such action during the operation of lighting the burner *b*, by the hand of the operator.

Referring to Figs. 2, 3, and 4, the jet-burner *e*, comprises a plug or valve *f*, revolvably mounted in the casing *e'*, of the jet-burner and provided with a gas way *f'*, and with a discharge nozzle *f²*. This rotary valve or plug *f*, is provided with a rearwardly projecting spindle *f²*, to which a sidewise or radially ranging operating handle *f³*, is secured by means of a set-screw *f⁴*.

s, is a spiral spring connected at one of its

extremities with the spindle f^2 , and at the other of its extremities with the casing e' , and tending to turn the valve or plug f , into such position that the gas way f' , thereof is out of alignment with the gas way e^2 , of the casing e' , as shown in Fig. 2. When the operating handle f^3 , is turned upward into the position illustrated in Fig. 4, the spring s , is brought into tension or torsion and the gas ways f' , and e^2 , are brought into alignment, thus permitting of a discharge of gas at the nozzle f^2 . As soon as the operating handle f^3 , is released, the resiliency of the spring s , acting in conjunction with the weight of the handle f^3 , causes the valve or plug to be turned into such position that the gas ways f' and e^2 , are out of alignment, whereby the discharge of gas from the nozzle f^2 , is prevented.

The nozzle f^2 , is detachably secured into the valve or plug f , and is provided at its front end with a very small discharge opening. This construction is advantageous because it permits of the renewal of the nozzle f^2 , without necessitating the removal of the plug or valve f , and because such a small discharge aperture may be readily closed and re-drilled to any required size.

The jet-burner illustrated in Fig. 5, is intended to be operated by a pull instead of a turn and in it, use is made of a needle-like plug or valve f^5 , adapted to co-operate with a nozzle e^3 , formed in the casing e^4 , of the jet burner e , and provided with a rearwardly extending spindle f^6 , that penetrates the stuffing box f^7 , and terminates in an operating draw knob f^8 .

s^2 , is a spiral spring coiled around the spindle f^6 , and having one of its ends in engagement with the collar on the spindle, and the other of its ends in engagement with the inner face of the stuffing box. When the draw knob f^8 , is pulled, the spring is compressed and gas entering through the gas way e^2 , is permitted to pass around the needle-like valve or plug f^5 , and issue from the nozzle e^3 . However, as soon as the draw knob or han-

dle f^8 , is released, the spring s^2 , automatically forces the needle-like valve or plug to its seat and prevents a passage through the nozzle e^3 . The mode of operation of the hereinabove described apparatus is as follows: To light the burner b , the operating handle f^3 , Fig. 2, is turned, or in the case of the device illustrated in Fig. 5, the operating handle or draw knob f^8 , is pulled, in either case gas issues from the jet-burner and may be readily lighted by means of a match, taper, or other lighting device. The valves b^2 , are then opened in order to permit a supply of gas to escape from the supply pipe b' , and issue at the burner b . This lighted jet is projected through the aperture a^2 , into proximity with the burner b , whereupon the gas or mixture of gas and air issuing therefrom is ignited. As soon as the burner b , has been lighted, the operator releases the operating handle of the jet-burner whereupon the spring of the latter immediately causes the burning jet to be extinguished, as has been hereinabove explained, and this automatic extinguishment of the jet-burner is important because it prevents the deposition of carbonaceous matter in and around the flues and burners of the gas range.

Having thus described the nature and objects of my present invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination in a gas range, heater or similar device of a burner, a jet-burner, a spring tending to normally extinguish the jet-burner, and an operating handle for restraining said spring and permitting of the lighting and temporary combustion of the jet-burner, substantially as described.

In testimony whereof I have hereunto subscribed my name in the presence of two witnesses.

CARTER H. PAGE, JR.

Witnesses:

KATIE M. GILLIGAN,
A. B. STOUGHTON.