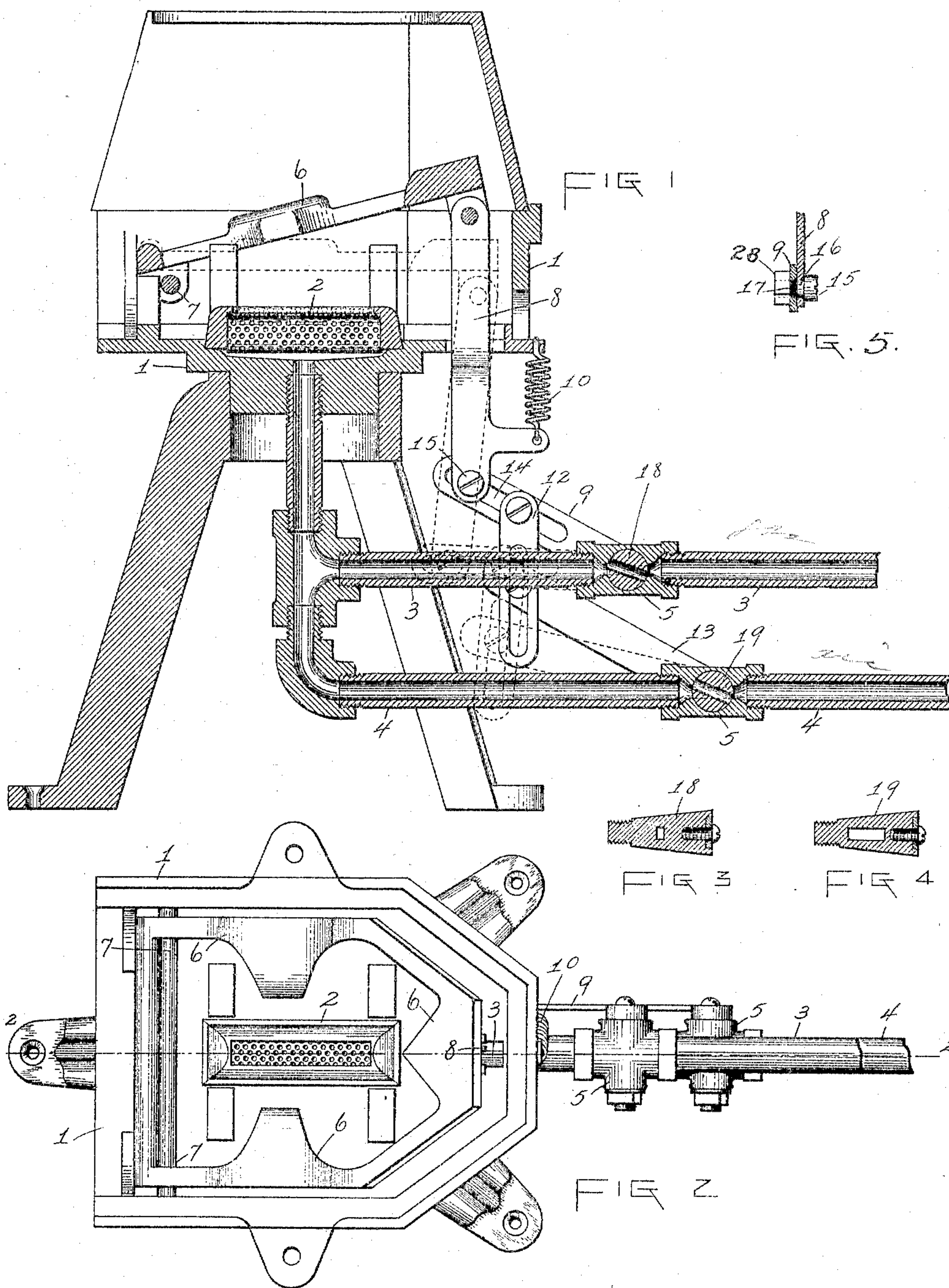


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PATENTED MAR. 7, 1905.

J. C. HANSEN.
AUTOMATIC CUT-OFF FOR GAS STOVES.
APPLICATION FILED MAR. 22, 1904.



WITNESSES
J. C. Hansen.
E. M. O'Reilly.

INVENTOR
James C. Hansen
By Mosher & Curtis
Attys

UNITED STATES PATENT OFFICE.

JAMES C. HANSEN, OF TROY, NEW YORK.

AUTOMATIC CUT-OFF FOR GAS-STOVES.

SPECIFICATION forming part of Letters Patent No. 784,043, dated March 7, 1905.

Application filed March 22, 1904. Serial No. 199,399.

To all whom it may concern:

Be it known that I, JAMES C. HANSEN, a citizen of the United States, residing at Troy, county of Rensselaer, and State of New York, have invented certain new and useful Improvements in Automatic Cut-Offs for Gas-Stoves, of which the following is a specification.

The invention relates to such improvements; and it consists of the novel construction and combination of parts hereinafter described and subsequently claimed.

Reference may be had to the accompanying drawings and the reference characters marked thereon, which form a part of this specification.

Similar characters refer to similar parts in the several figures.

Figure 1 of the drawings is a central vertical longitudinal section of a gas-stove provided with my improved automatic cut-off. Fig. 2 is a top plan view of the same with the hood removed. Fig. 3 is a central vertical longitudinal section of the gas-valve spigot. Fig. 4 is a similar view of the air-valve spigot. Fig. 5 is a sectional view illustrating the adjustable pivotal connection between a link and arm in the valve-operating mechanism.

The object of the invention is to automatically reduce the supply of fuel to a gas-stove when a full supply is not required on account of the removal from the stove of an article to be heated.

Referring to the drawings, I have shown the invention applied to an ordinary form of gas-stove commonly used in laundries for heating sad-irons. 1 is the body of the stove, having the burner 2, with which are connected the separate gas-pipe 3 and air-pipe 4, connected, respectively, with supplies of gas and air under pressure. Each of said supply-pipes is provided with a separate controlling-valve 5. These valves are preferably spigot-valves having the axes of their respective spigots parallel with each other. The body of the stove is provided with a frame or lever 6, pivoted at 7 to swing upon a horizontal axis at the front of the stove, which frame is connected by a link 8, extending down through the stove-top, with an arm 9, fixed upon the spigot 18 of the gas-valve, whereby oscillating move-

ments of said frame or lever serve to impart rotative movements to said spigot. Said frame or lever when relieved of weight is held in a raised or upwardly-inclined position by means of the coil-spring 10, connecting a lower portion of said link 8 with an overhanging portion of the stove-body. The arm 9 on the gas-valve is operatively connected by means of a link 12 with a similar arm 13 on the air-valve spigot 19, whereby rotative movements imparted to the gas-valve spigot are transmitted to the air-valve spigot.

The frame or lever 6 is adapted to be depressed by the weight of a superimposed article placed upon the stove to be heated, such as a sad-iron, and the arrangement of the parts is such that when so depressed both the air and gas valves are automatically opened to substantially their full capacity; but when the frame or lever 6 is permitted to rise under the influence of the spring 10 upon being relieved from the weight of the superimposed iron or other article both said valves are automatically closed to a greater or less degree. The movement of the valves is preferably such that when the operating lever or frame 6 is raised the air and gas valves are not wholly closed, but left slightly open to afford a supply of gas and air to the burner sufficient to maintain a small flame therein adapted to ignite the full supply of fuel when the valves are again fully opened by the depression of said frame. The total amount of fuel supplied to the burner and the relative proportions of air and gas can be varied as desired by changing the adjustment of the connections between the several links and arms.

The arm 9 is shown provided with a slot 14, whereby the links 8 and 12 are adjustably connected therewith, said connection being accomplished by means of a screw-bolt 15, having a cylindrical shoulder 16, rotatively fitting an aperture in the link 8 and adapted to bear upon the inner side of the arm 9, and having a screw-threaded shank 17 inserted through and adjustable in said slot 14 and adapted to be securely locked in adjusted position therein by means of the nut 28, adapted to bear upon the outer side of said arm. The link 12 is provided in its lower end with a slot

15, whereby the arm 13 is adjustably connected therewith in the same manner as the link 8 is connected with the slotted arm 9, and in the same manner the upper end of the link 5 12 is adjustably connected with the slotted arm 9.

The construction above described renders unnecessary the use of a separate pilot-burner, which has heretofore been found necessary in constructions for a somewhat similar apparatus.

In stoves of this character the relative quantities of air and gas required for substantially perfect combustion are well known. I am therefore able to secure similar variations in the supplies of air and gas by substantially equal angular movements of the two spigots by making both spigot-apertures of the same width or dimensions, measured circumferentially on the spigot, and varying the relative length or dimensions of the spigot-apertures, measured longitudinally of the spigots, to secure the desired greater area of supply-aperture in the air-valve, as shown in Figs. 1, 4, 25 and 5.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a gas-stove, the combination with a burner; of air and gas pipes connecting with said burner each having a spigot-valve provided with an offset arm; a link; a pivotal connection between one end of said link and one of said arms adjustable longitudinally of

the latter; a pivotal connection between the other end of said link, and the other valve-arm adjustable longitudinally of said link; a movable member adapted to be displaced by an article placed over the burner; means for automatically replacing said member when said article is removed; a link depending from said member; and a pivotal connection between said link and one of said valve-arms adjustable longitudinally of the latter.

2. In a gas-stove, the combination with a burner, of air and gas pipes leading to said burner; a valve in the gas-pipe having a spigot provided with a valve-aperture; a valve in the air-pipe having a spigot provided with a valve-aperture of the same dimension as the aperture in the gas-valve spigot measured circumferentially of the spigots, and of a greater length than the aperture in the gas-valve spigot measured longitudinally of the spigots; a movable member adapted to be operated by an article placed above the burner; and operating connections between said member and both of said valve-spigots, whereby simultaneous and substantially equal angular movements of both spigots are induced by operation of said movable member.

In testimony whereof I have hereunto set my hand this 10th day of March, 1904.

JAMES C. HANSEN.

Witnesses:

S. C. BOOTH,
E. M. O'REILLY.