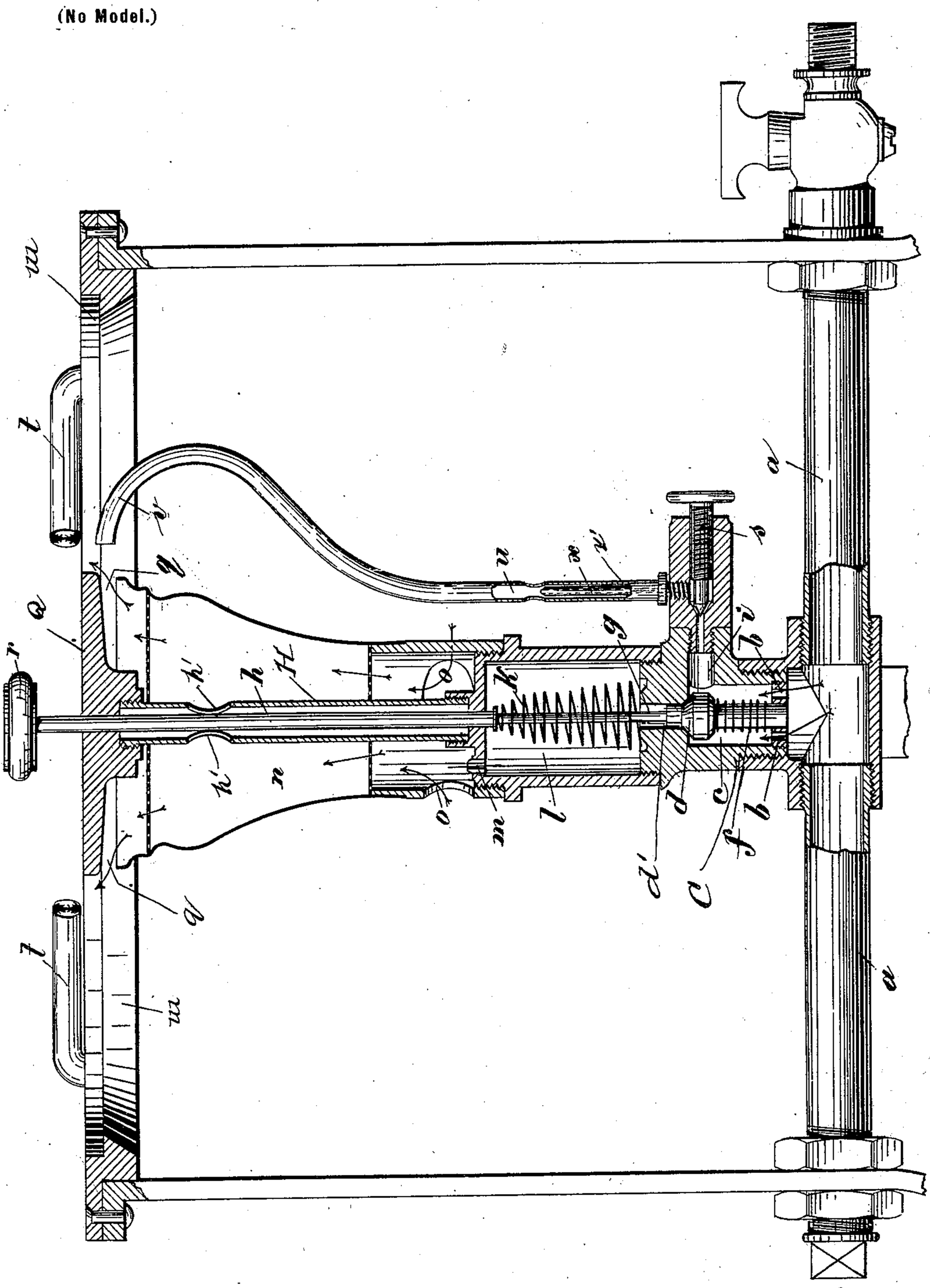
No. 627,710. Patented June 27, 1899.

W. J. SCHMITZ.

GAS COOKING STOVE.

(Application filed July 26, 1897.)

(No Model.)



Witnesses:
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UNITED STATES PATENT OFFICE.

WILHELM JOS. SCHMITZ, OF HAMBURG, GERMANY.

GAS COOKING-STOVE.

SPECIFICATION forming part of Letters Patent No. 627,710, dated June 27, 1899.

Application filed July 26, 1897. Serial No. 646,014. (No model.)

To all whom it may concern:

Be it known that I, WILHELM JOS. SCHMITZ, of Hamburg, in the German Empire, have invented a new and useful Gas Cooking-Stove, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention relates to gas cooking-stoves; and it consists in certain improved constructions and combinations of parts, forming an economical and efficient cooking device and one in which the consumption of gas is limited to the time only in which a cooking utensil is on the stove.

The figure of the drawing shows the stove in a vertical section.

The stove consists of a supporting-frame comprising, among its members, the top *w* and three or more supporting-standards A′ A′ A′. Supported upon this frame and secured thereto is a pipe *a*, which is connected in any preferred way with a gas-supply. The burner is supported upon this pipe and is composed of the valve-casing C, the mixing-chamber B, the tube B′ connecting these two, and other auxiliary parts. The valve-casing C is connected directly to the pipe *a*, the interior chamber *c* thereof receiving the gas directly from said pipe. The upper wall of the valve-casing C is provided with an aperture for the passage of the gas from the casing, and this aperture or passage *d′* is controlled by the valve *d*, which is forced upward to close the aperture or passage *d′* by a spring *f*. The casing C also has a side passage *i*, which is controlled by the valve-cock *s*, located in the extension S, connected with the valve-casing C by a screw-threaded tap engaging threads in the passage *i*.

To the upper end of the valve-casing C is secured the tubular casing or chamber B′, and to the top of this is secured the mixing-chamber B. This mixing-chamber is outwardly expanded near its top and is provided at its lower end with the apertures *o* for the admission of air. The top or upper wall of the tubular chamber B′ is provided with apertures *m* for the passage of the gas into the mixing-chamber B. The gas passes through these with such force as to draw in air through the openings *o*, and the two are mixed as they pass upward in the chamber, the screen *p* serving to complete this intermingling of the gas and air, as well as to prevent the entrance of the flame of the burner into the mixing-chamber, in a well-known way.

To the center of the top of the tubular chamber B′ is secured a tube H, and to the top of this tube is secured the deflector Q, which forms, with the top of the mixing-chamber, a narrow annular opening *q* for the discharge of the gaseous fuel.

An aperture is provided through the deflector Q and the top of the chamber B′, and a rod *h*, provided with a flat head *r*, extends downwardly through these openings and through the tube H. This rod *h* in turn rests upon a rod *g*, which has its lower end resting upon the valve *d*, with its upper end in contact with the rod *h*. The spring K normally holds the two in such a position that the head *r* of the rod *h* is above the level of the grids *t*, secured to the top of the frame. The tube H is provided near its upper end with openings *h′*, so that any gas which may enter the tube at its lower end when the rod *r* is depressed will pass readily into the mixing-chamber and to the burner-orifice *q*.

It will thus be seen that when a utensil is placed upon the grids *t* its bottom will contact with and depress the head *r* and rods *h* and *g*, forcing the valve *d* downward and permitting gas to pass into the casing B′ and to the burner. It will also be noted that the spring K supports the rods *h* and *g*, so that a comparatively light spring is required in the valve-casing, thus reducing wear of the valve and its seat and rendering repairs, when required, much more readily and easily made.

In order to supply an auxiliary lighting-flame for the gaseous materials issuing from the annular opening, I connect a tube *u* with the extension S. This tube extends upward and discharges near the under side of the deflector Q, and in order that the flame of this auxiliary burner shall be supplied with mixed gas and air the lower end of the same is closed with a plug *x′*, through which there is a small passage *x* for the gas. The pipe *u* is provided with apertures *v′ v′* near the end of the plug *x′*. The passage of gas through the pipe *u* is controlled by the cock *s*. This cock is normally open sufficiently to maintain a small constant lighting-flame at the end of the pipe *u*. It

will thus be seen that by maintaining the lighting-flame at *v* whenever the valve *d* is opened by placing a cooking utensil on the stove the gas issuing from the annular opening of the burner will be at once automatically ignited.

As the removal of the utensil will permit the spring R to raise the rods *h* and *g*, this will permit the spring *f* to close the valve and cut off the supply of gas, leaving the lighting-burner alone burning.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. In a gas-stove the combination with the main frame having a grid to support cooking utensils of the burner having the deflector at the top, the supporting-tube therefor, the valve controlling the supply of gas to the burner, and a rod passing through said deflector and its supporting-tube and extending upward a short distance above said grid, said rod being operatively connected with the controlling-valve, substantially as described.

2. In a gas-stove the combination with the main frame having a grid for supporting cooking utensils, a burner having a deflector at the top, the supporting-tube for said deflector, the valve controlling the supply of gas to the burner and a rod having its upper end above the level of said grid and extending downward through said deflector and supporting-tube and operatively connected with said controlling-valve, substantially as described.

3. In a gas-stove, the combination with the burner, the utensil-support and the spring-supported valve for controlling the supply of gas to the burner, of the spring-supported rod for operating the valve, extending above the utensil-support, substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

WILHELM JOS. SCHMITZ.

Witnesses:

GUSTAV WEBER,

ERNST BAUMHOFF.