J. L. BRIGHT.

COMBINED GAS AND COAL RANGE.

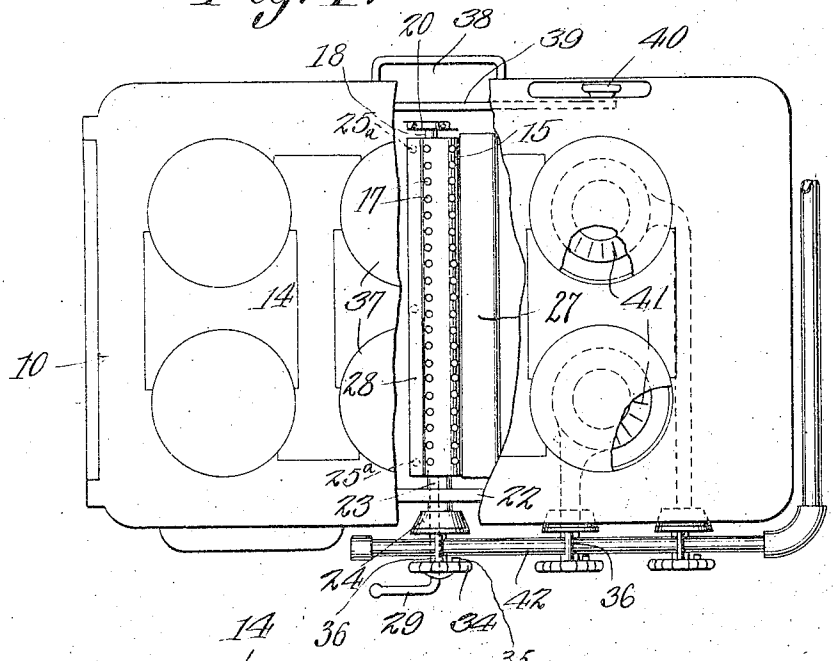
APPLICATION FILED JULY 20, 1914.

1,142,928.

Patented June 15, 1915.

2 SHEETS—SHEET 1.

Fig. 1.



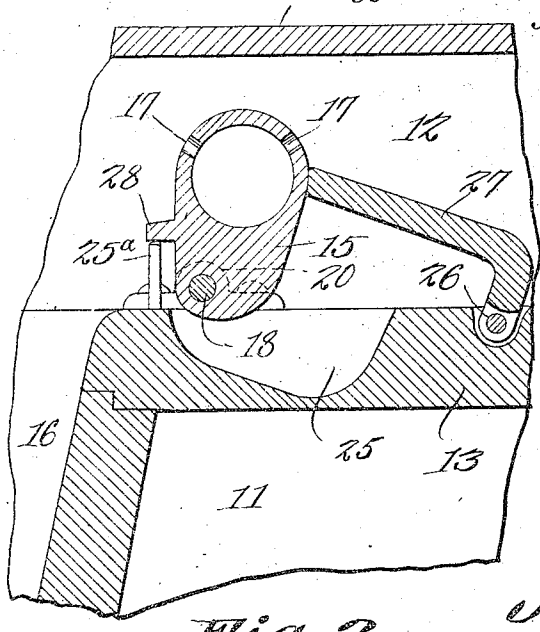


Fig. 2.

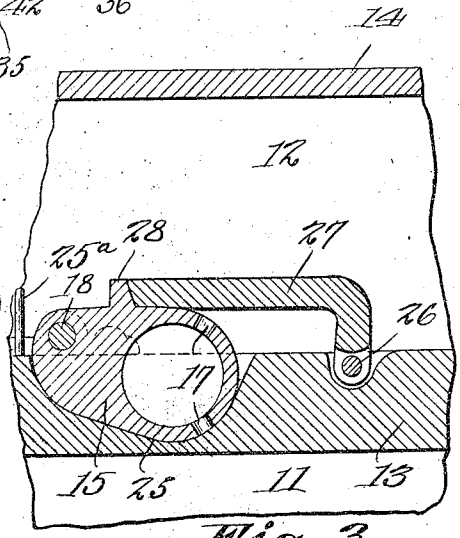


Fig. 3.

Jesse L. Bright
Inventor,

by Hubert Stevens & Co.

Attorneys.

Witnesses
H. B. Woodew.
M. C. Lucas.

J. L. BRIGHT.

COMBINED GAS AND COAL RANGE.

APPLICATION FILED JULY 20, 1914.

1,142,928.

Patented June 15, 1915.

2 SHEETS—SHEET 2.

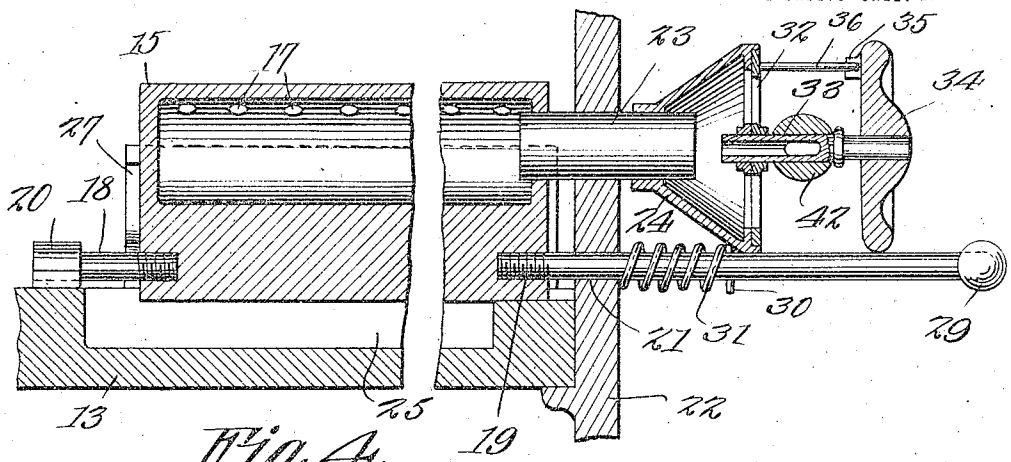


Fig. 4.

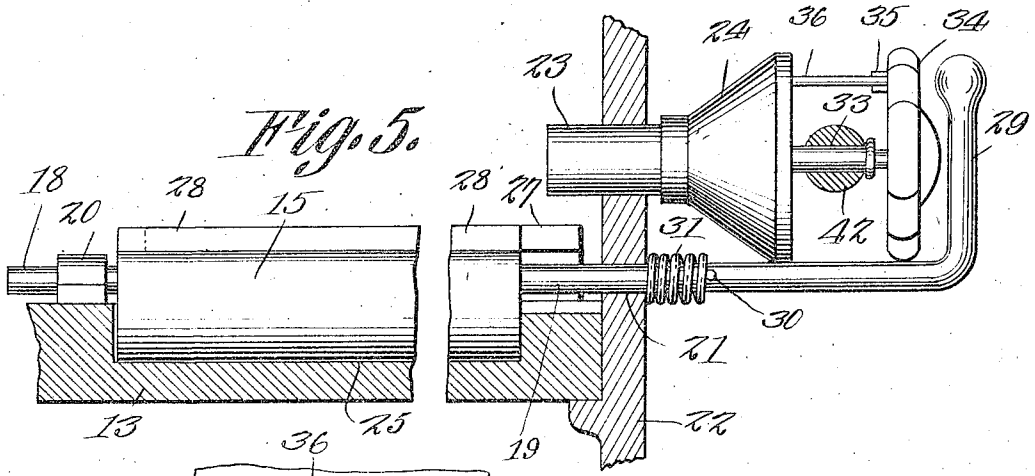


Fig. 5.

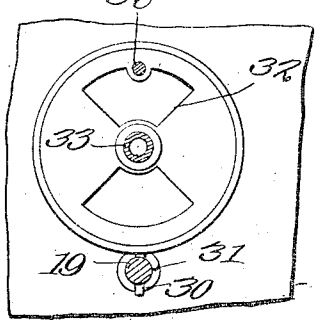


Fig. 6.

Jesse L. Bright

Inventor,

by Wilbur Stevens & Co.

Attorneys.

Witnesses
H. B. Woodew.
M. C. Lucas

UNITED STATES PATENT OFFICE.

JESSE L. BRIGHT, OF CHICAGO, ILLINOIS.

COMBINED GAS AND COAL RANGE.

1,142,928. Specification of Letters Patent. Patented June 15, 1915.

Application filed July 20, 1914. Serial No. 851,972.

To all whom it may concern:

Be it known that I, JESSE L. BRIGHT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Combined Gas and Coal Ranges, of which the following is a specification.

This invention relates to improvements in combined gas and coal ranges where the gas burners are a permanent part of the range and may be used at will.

The invention has for its object to provide a novel and improved gas burner for a range of the type stated, and which is so mounted in the range that it can be readily placed in position for use, or swung out of the way when coal fuel is to be used in the range.

This object is attained by means of a combination and arrangement of parts to be hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of an ordinary kitchen range or stove showing the application of the invention, the top of the stove being partly broken away; Figs. 2 and 3 are cross-sections of the gas burner in different positions; Fig. 4 is a longitudinal section of the burner in the position shown in Fig. 2; Fig. 5 is an elevation of the burner in the position shown in Fig. 3; and Fig. 6 is a front elevation of the air and gas mixer.

Referring specifically to the drawings, 10 denotes an ordinary kitchen range or stove having an oven 11 around which extends a draft flue as usual. The top draft flue is indicated at 12, the same being, as usual, located between the top 13 of the oven and the top 14 of the range. The gas burner 15 which is the subject matter of the present invention is located in the flue 12 adjacent to that end of the wall 13 which is next to the fire pot 16 of the range.

As shown in the drawings, the burner 15 is an elongated tubular body having two rows of perforations or flame apertures 17. The burner extends transversely of the flue 12 and has axially alined trunnions 18 and 19, respectively, at its ends, whereby it is rotatably mounted in the flue. The trunnion 18 is journaled in a bearing 20 mounted on the wall 13 near the back of the range, and the trunnion 19 passes through a bearing opening 21 in the front wall 22 of the range. The trunnions turn freely in the bearings and they are also slidable therein for a purpose to be presently described. The rear end of the burner tube 15 is closed, and its forward end is open, said open end being adapted to receive a pipe 23 leading from the usual air and gas mixing cap 24.

In the top of the wall 13 is a pocket 25 in which the burner 15 is adapted to seat when it is not to be used, said pocket being shaped to snugly accommodate the burner, as shown in Fig. 3. From the wall 13, on one side of the pocket 24, extend upstanding pins 25^a and to said wall, on the other side of the pocket, is hinged, as indicated at 26, a combined shield and prop 27 for the burner.

The burner 15 is substantially elliptical in cross-section, and when it is in position for use, it projects upward into the flue 12 with its major axis substantially vertical, in which position it is held by the prop 27, the latter engaging one side of the burner. The other side of the burner has an outstanding longitudinal flange or abutment 28 which seats on the pins 25^a Fig. 2 clearly shows the position of these parts when the burner is placed ready for use. When the burner is not to be used, the prop 27 is swung back slightly, clear of the burner, and the latter is allowed to swing down into the pocket 25, the prop swinging back on the top of the burner thus seating in the pocket. Fig. 3 shows the parts in this position. It will be noted that the prop covers the apertured portion of the burner tube and fits at its free end against the flange 28, which is now on top. Thus, the flame apertures or perforations of the burner are shielded from ashes or soot while a coal or other solid fuel fire is used in the range.

Before the burner 15 can be swung into the pocket 24 as hereinbefore described, it is necessary to move it inward in the direction of its length to disconnect its forward end from the pipe 23, which is done by pushing the trunnion 19 inward, said trunnion passing through the front wall 22 of the stove and having a handle 29 at its outer end. Between the wall 22 and an abutment 30 on the trunnion, a spring 31 is coiled around the latter. The burner is shoved inward against the tension of this spring, so that when the burner is swung upward into alinement with the pipe 23, and the handle 29 is released, the spring advances the burner so that the pipe 23 enters its open

end. The tension of the spring holds the burner and the pipe coupled, and thus no leakage of gas is liable to occur.

The mixer 24 has the usual rotatable disk 32 for regulating the air supply. The gas valve 33 has a handle 34 on the back of which is a lug 35. From the face of the disk 32 extends a stem 36 which is in the path of the lug 35 and is intercepted thereby shortly before the handle 34 has been turned to completely shut off the gas. A continued turning of the handle to complete the shut off of the gas, also turns the disk 32 to close the air supply to the mixer 24, the movement of the valve handle 34 being transmitted to the disk by the lug 35 and the stem 36. It will be evident from the foregoing that no air can enter the range through the mixer 24 after the same is shut off, which is desirable when coal or other solid fuel is used in the range. If air were allowed to enter through the mixer, it would be apt to disturb the circulation or reduce the draft.

The burner 15 is located directly beneath two lids 37 covering openings in the stove top 14, so that upon removing these lids, the cooking utensils may be placed directly over the flames issuing from the burner; or the lids may be left on, in which event the heat from the burner will not only be local but will also circulate around the oven 11.

In the smoke flue 38 of the range is a damper 39 having a suitable operating device 40. This damper will be partly closed when the gas burner is in use. In the flue 12 are also located two ordinary circular gas burners 41, provided with mixers and shut off devices like the ones hereinbefore described.

The gas supply pipe of the burners is shown at 42, the same being connected to the valves of the burners in the ordinary manner.

I claim:

1. In a solid fuel range, a gas burner pivotally mounted beneath the top thereof to swing to operative and inoperative positions, said burner being longitudinally slidable and open at one end, a gas supply pipe entering the open end of the burner, a wall in the range adjacent to the burner having a pocket in which the burner is adapted to be swung when not in use, the burner entering the pocket at the limit of its longitudinal movement in one direction, and a hinged shield adjacent to the pocket and covering the flame apertures of the burner when it is seated in the pocket.

2. In a solid fuel range, a gas burner pivotally mounted beneath the top thereof to swing to operative and inoperative positions, a wall in the range adjacent to the burner having a pocket in which the burner is adapted to be swung when not in use, a combined shield and prop for the burner hinged adjacent to the pocket on one side of the burner and covering the flame apertures of the burner when it is seated in the pocket, said shield and prop engaging one side of the burner when the same is out of the pocket in operative position, the other side of the burner having an outstanding abutment, and pins extending from the aforesaid wall, on which pins the abutment seats when the burner is in the last-mentioned position.

3. In a solid fuel range, a gas burner pivotally mounted beneath the top thereof to swing to operative and inoperative positions, said burner being longitudinally slidable and open at one end, a gas supply pipe entering the open end of the burner, a wall in the range adjacent to the burner having a pocket in which the burner is adapted to be swung when not in use, the burner entering the pocket at the limit of its longitudinal movement in one direction, resilient means opposing said longitudinal movement of the burner, and a hinged shield adjacent to the pocket and covering the flame apertures of the burner when it is seated in the pocket.

4. In a solid fuel range having a draft flue located beneath the top of the range, a gas burner extending across said flue from the front to the rear, the ends of the burner having axially alined journals for pivotally supporting the burner, bearings for said journals, the bottom wall of the aforesaid flue having a pocket extending adjacent to the burner and parallel thereto, in which pocket the burner is adapted to be swung when not in use, and a hinged shield mounted adjacent to the pocket and adapted to be swung across the burner to cover the flame apertures thereof when said burner is seated in the pocket.

5. In a solid fuel range, a gas burner pivotally mounted beneath the top thereof to swing parallel to its longitudinal axis, said burner having flame apertures in its side and being longitudinally slidable, one end of the burner being open to take a gas supply pipe, a wall in the range adjacent to the burner having a pocket in which the burner is adapted to be swung when not in use, the burner entering the pocket at the limit of its longitudinal movement in one direction, and a hinged shield adjacent to the pocket and covering the flame apertures of the burner when it is seated in the pocket.

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

JESSE L. BRIGHT.

Witnesses:
S. J. LEHRER.
H. G. BATCHELOR.