

May 25, 1926.

1,586,472

F. S. ROCHFORD

FUEL IGNITER

Filed Jan. 2, 1926

Fig. 1.

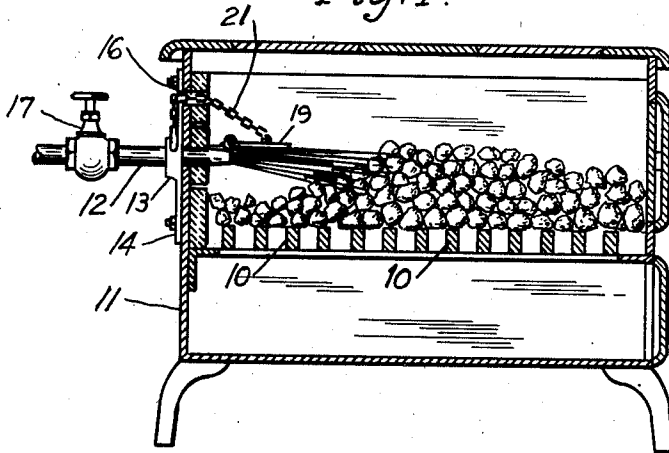


Fig. 2.

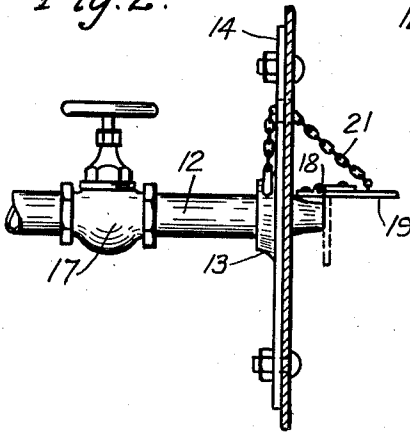


Fig. 3.

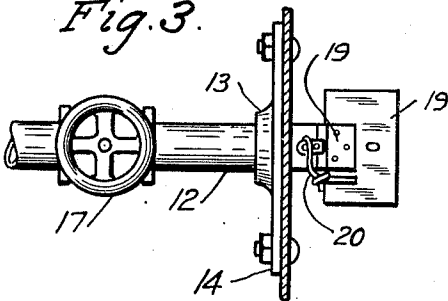


Fig. 4.

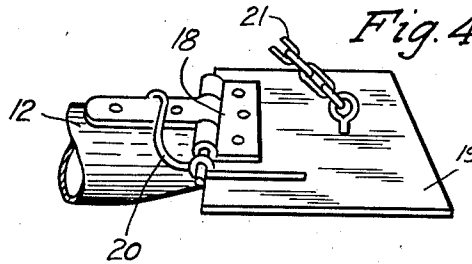
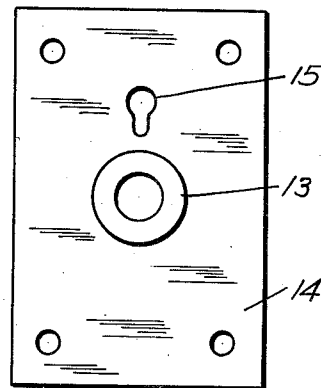


Fig. 5.



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UNITED STATES PATENT OFFICE.

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FUEL IGNITER.

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This invention relates to devices for igniting fuel in furnaces, cook stoves and other heaters of this character, the general object of the invention being to provide means whereby a blast of gas may be projected against a mass of fuel resting upon the grate of the furnace or stove to ignite the same.

More specifically one of the objects of this invention is to provide a pilot light pipe extending through one wall of the stove or furnace and directed toward the coal on the grate and provide a deflector or baffle which may be shifted into a fully open or a fully closed position and which will direct the flame projected from the pilot pipe either downward against the coal or permit the flame to be projected directly outward against the upper portion of the fuel.

A further object is to provide a construction of this character in which the pilot pipe is disposed above the grate and sufficiently so as to prevent the mouth of the pilot pipe being closed by ashes, cinders or the like.

My invention is illustrated in the accompanying drawings wherein:—

Figure 1 is a vertical sectional view through a cook stove showing my invention applied thereto;

Figure 2 is a vertical sectional view through the side wall of the stove showing the pilot pipe and the deflector in elevation;

Figure 3 is a horizontal section, the pilot pipe and deflector being shown in plan;

Figure 4 is a perspective view of the end of the pilot pipe and the deflector; and

Figure 5 is a front elevation of the plate which supports the pilot pipe and which is attached to the wall of the stove.

In Figure 1 I have illustrated my invention as applied to an ordinary cook stove having the usual grate 10. It will be understood that my invention may be applied to any form of stove or to any form of furnace. Through the rear wall 11 of the stove there is disposed a pilot pipe 12. This pipe extends through the annular boss 13 of the plate 14, which is bolted, riveted or otherwise attached to the wall of the stove. This plate is formed with a key hole slot 15 and, of course, the wall of the stove is to be formed with a slot 16 immediately behind this key hole slot.

The pilot pipe 12 is provided with a valve 17 whereby the gas discharged through this pipe may be controlled. Attached to the forward end of the pilot pipe is a hinge, designed

generally 18 and to one leaf of the hinge is attached the baffle plate 19 so that this baffle plate may swing down either to the position shown in dotted lines in Figure 2 or to the position shown in full lines in this figure or to an intermediate position. The spring 20 engages this baffle plate to swing it downward, the rear end of this spring extending over the pilot pipe. A chain 21 is attached to the baffle plate and extends downward through the apertures 16 through the key hole slot 15. The spring acts to force the baffle plate downward and by pulling upon the chain the baffle plate may be raised to any desired extent, the links of the chain being engaged in the contracted portion of the key hole slot 15 in order to hold the chain from being pulled out.

It will be particularly noted that the pipe 12 is disposed above the general level of the coal on the grate 10 and discharges a blast of ignited gas against the coal. By placing this pipe above the level of the coal there will be no chance for ashes, cinders or the like to plug up or close the discharge end of the pilot pipe. This igniting device takes the place of paper or kindling for igniting coal or other fuel and, of course, after the fire is started the gas is shut off by means of the valve 17.

While the igniter is shown as attached to the rear of a range or cook stove, it is understood that it may be applied to the front or side or, in fact, in any convenient place. This device may also be used as a permanent feature for igniting furnaces either singly or in series. It may also be used on either side of an open fire place and this permits it to be attached to any existing range or obviously, the device may form part of the permanent attachments of stoves or ranges.

I claim:—

1. The combination with a heater, of a gas pipe permanently mounted on the heater and extending into the heater above the grate thereof and adapted to discharge a blast of ignited gas against a mass of fuel, a deflector hingedly mounted upon the inner end of said blast pipe, and means disposed exteriorly to the heater for shifting the deflector into various angular relations to the blast pipe.

2. The combination with a heater, of a gas pipe permanently mounted on the heater and extending into the heater above the

grate thereof and adapted to discharge a blast of ignited gas against a mass of fuel, a deflector hingedly mounted upon the inner end of said blast pipe, a spring urging said deflector downward, and a flexible connection attached to the deflector and extending out to the exterior of the heater whereby the deflector may be raised.

3. An ignition attachment for stoves or other heaters comprising a plate adapted to be attached to one wall of the stove and having a slot, a blast pipe extending through said plate and carried thereby, the inner end of said blast pipe having a deflector hinged thereto for vertical movement, and means extending out through said slot whereby the deflector may be shifted.

4. An ignition attachment for stoves and furnaces comprising a plate adapted to be attached to the wall of the stove and having a key hole slot, a blast pipe extending through said plate and supported thereby, the blast pipe exteriorly of the plate having a valve, a deflector hinged to the inner end of the pipe for vertical movement, a spring urging the deflector in one direction, and a chain attached to the deflector and extending out through said key hole slot whereby the deflector may be shifted against action of the spring.

In testimony whereof I hereunto affix my signature.

FRANK S. ROCHFORD.