

E. E. EISENBACH.
OIL BURNER.
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1,322,771.

Patented Nov. 25, 1919.

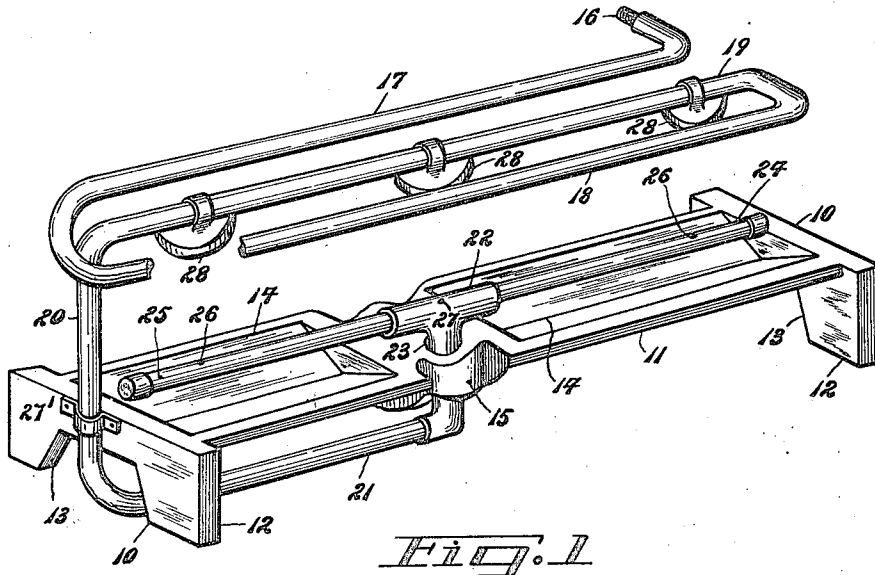


Fig. 1

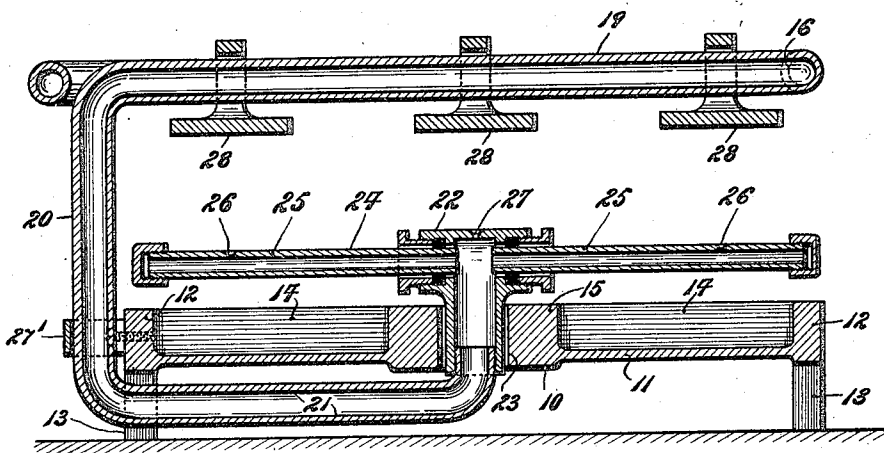


Fig. 2

WITNESS:

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ERNEST E. EISENBACH, OF PHILADELPHIA, PENNSYLVANIA.

OIL-BURNER.

1,322,771.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, ERNEST E. EISENBACH, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented new and useful Improvements in Oil-Burners, of which the following is a specification.

The invention relates to liquid and gaseous fuel burners and has for an object to provide an oil burner for use in the production of heat from oils such as kerosene and the like.

The invention comprehends among other features, the provision of an oil burner which is particularly adapted for use in stoves and ranges, to be placed in the fire box thereof and connect with a suitable oil supply so that the kerosene or other oil supplied to the burner proper, can be adapted for the heating of the stove or range, the kerosene prior to its exit from the burner proper being preheated to be partially or wholly converted into a gas or vapor which is then ignited and consumed at the burner proper.

Still further the invention comprehends a device which is of a simple construction, and consists of few parts which can be cheaply manufactured.

In the further disclosure of the invention, reference is to be had to the accompanying drawings, constituting a part of this specification, in which similar characters of reference denote corresponding parts in all the views, and in which,—

Figure 1— is a perspective view of the burner, and

Fig. 2— is a vertical longitudinal sectional view taken through the burner.

Referring more particularly to the views, the numeral 10 indicates the burner in its entirety and which consists substantially of a body 11 formed with suitable end pieces or bases 12, each of which is provided with a cut-out portion 13. Between the bases 12 and forming a part of the body 11 are basins or flash pans 14 and the central portion of the body is preferably a solid piece as at 15, and connects of course and is integral with the flash pans 14, one of which is formed on each side of the central portion of the body.

A pipe has connection at 16 with a suitable oil supply (not shown) and the pipe is bent to form a straight portion 17 and

then curved to return and form a second straight portion 18, parallel to the straight portion 17 and then again curved and returned to form a straight portion 19 with the straight portions 17, 18, 19, parallel to each other and all lying in the same horizontal plane, the pipe being then bent downwardly as at 20 to extend adjacent to one of the bases 12 and being then bent through the cut-out portion 13 thereof to extend beneath the base and form a straight portion 21 which has connection with a suitable T 22, disposed in a central opening 23 in the central portion 15 of the body, the upper portion of said T extending beyond the central portion of the body and forming a part of a burner proper 24 which includes oppositely extending burner pipes 25 each of which is provided with an orifice 26, the T also having orifices 27.

It will be seen by reference to the views that by having a suitable clip 27' securing the straight portion 20 to one of the bases as shown, the said straight portion 20 forms a support for the horizontal portions 17, 18, 19, which in their entirety may be termed a pre-heater, or the pre-heating portion of the supply pipe, this pre-heater being arranged in superposed relation to the body of the burner and above the flash pans and the burner proper. The burner pipes 25, it will be seen, are also arranged in superposed relation to the flash pans and above the burner pipes and in line with the orifices 26 thereof and the orifices 27 of the T forming part of the burner, are disposed suitable deflecting devices or spreaders 28 which are loosely mounted to turn or to slide upon the centrally disposed straight portion 19 of the preheater, which on account of their superposed relation to the orifices of the burner, will spread the resulting flame so as to either deflect to one side or the other, or evenly spread the flame as it rises from the burner.

In the use of the burner described, a quantity of oil or some other suitable combustible fluid is poured into one or both of the pans 14 and ignited, and assuming that a flow of oil is taking place through the supply pipe to the pre-heater and then through the same, the heat from the burning fluid in the pans will heat the burner pipes and also heat the pre-heater so that the resulting fluid passing therethrough, by the time it reaches the burner pipes, will be in the nature of a gas

or vapor which will of course burst into flame as it flows from the orifices 26, 27. This flame will then in turn vaporize the oil in the pre-heater and thus a continuous flame at the burner is assured with a minimum amount of smoke or soot depending entirely upon the character of the fluid that is employed in the burner.

As mentioned heretofore, the burner is particularly adapted for use in connection with stoves and ranges, especially the usual coal burning stoves which it is desired to convert to oil burners, although it will of course be understood that the oil burner described and set forth herein, may be adapted for various other purposes. It will be also understood that the burner may be constructed with one or a plurality of the orifices so as to provide a single or double burner, as the case may be.

Having described my invention, I claim—

1. An oil burner comprising a body providing a flash pan, bases for the said body and supporting the latter, a burner proper disposed above the flash pan and a pipe connecting with the burner and extending beneath the flash pan and through a cut out portion of one of the bases to project upwardly adjacent thereto, portions of said pipe being coiled above the flash pan and in superposed relation to the burner proper to form a pre-heater.

2. An oil burner comprising a body providing a flash pan, bases for said body and supporting the latter, a burner proper disposed above the flash pan and a pipe connecting with the burner and extending beneath the flash pan and through a cut out portion of one of the bases to project upwardly adjacent thereto, portions of said pipe being coiled above the flash pan and in superposed relation to the burner proper to form a pre-heater, and a bracket securing a portion of said pipe to the base through which it passes, to facilitate the support of the said pre-heater above the burner proper.

3. An oil burner comprising in combination with a body providing a flash pan, a pipe and a burner proper, said burner proper being disposed above the flash pan and supported on the body with one end of said pipe connected to said burner proper, said pipe then passing beneath the flash pan and adjacent one end of the body and extending upwardly to have portion thereof bent to form a plurality of parallel portions forming a pre-heater disposed in superposition to the flash pan and burner proper, with the straight portions of the pre-heater lying in the same horizontal plane and parallel to each other.

In testimony whereof I affix my signature.

ERNEST E. EISENBACH.