

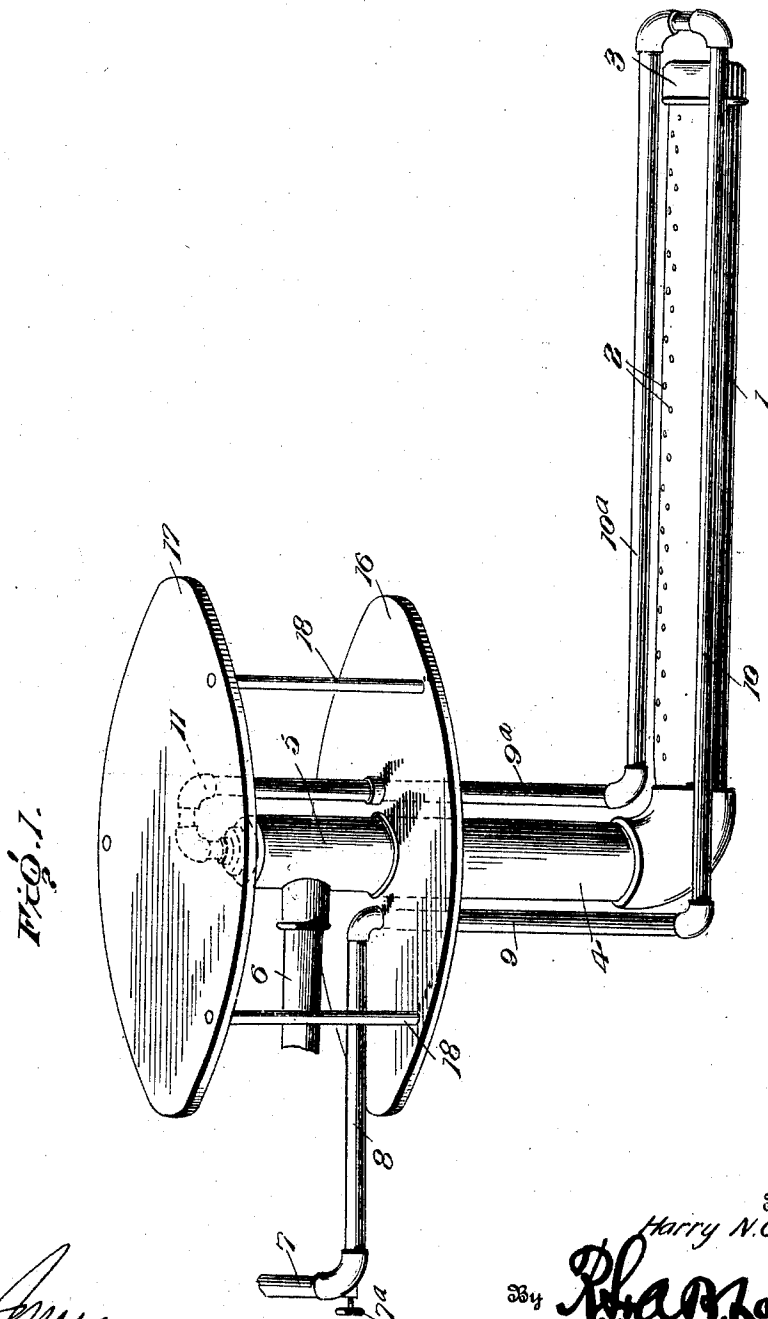
No. 868,649.

PATENTED OCT. 22, 1907.

H. N. CROSSLEY.
BURNER ATTACHMENT FOR STOVES.

APPLICATION FILED MAR. 19, 1907.

2 SHEETS—SHEET 1.



Witnesses

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 [Signature]
 W. J. Woodson

Inventor

Harry N. Crossley

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FIG. 3.

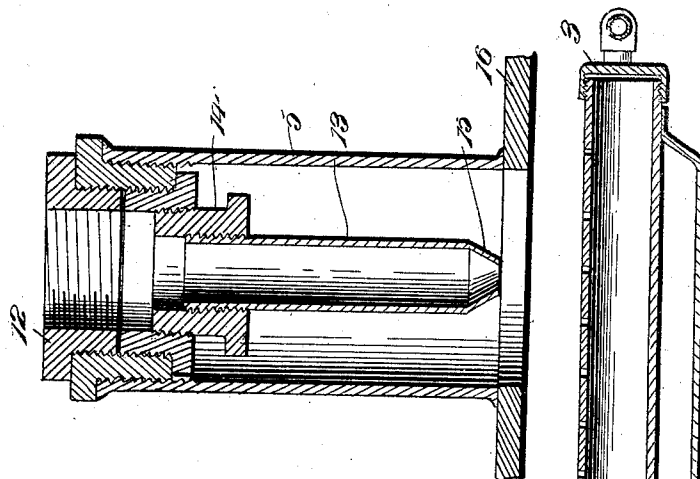
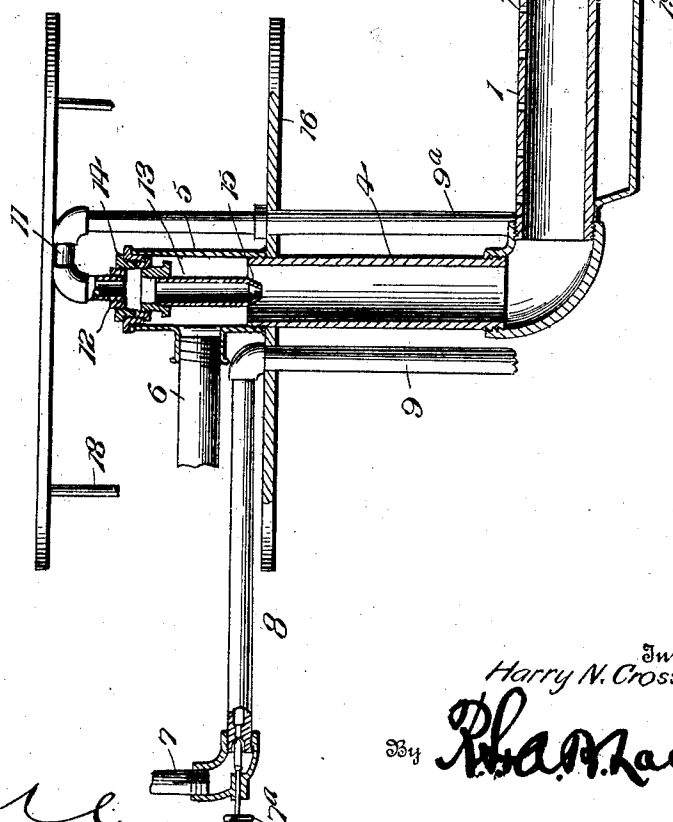


FIG. 2.



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UNITED STATES PATENT OFFICE.

HARVEY N. CROSSLEY, OF MADISON, OKLAHOMA TERRITORY.

BURNER ATTACHMENT FOR STOVES.

No. 868,649.

Specification of Letters Patent.

Patented Oct. 22, 1907.

Application filed March 19, 1907. Serial No. 363,225.

To all whom it may concern:

Be it known that I, HARVEY N. CROSSLEY, a citizen of the United States, residing at Madison, in the county of Beaver and Territory of Oklahoma, have invented certain new and useful Improvements in Burner Attachments for Stoves, of which the following is a specification.

This invention has for its object an improved oil burner attachment for stoves which is composed of comparatively few and simple parts that may be cheaply manufactured and easily assembled and that will be durable in construction and which may be easily inserted within the fire box of an ordinary range or coal or wood burning stove, to burn, as fuel, gas admixed with air, the gas being automatically generated as it passes through the device to the burner of the same.

With this and other objects in view as will more fully appear as the description proceeds, the invention consists in certain constructions and arrangements, 2) which I shall hereinafter fully describe and then point out the novel features in the appended claims.

For a full understanding of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result, reference is to be had to the following description and accompanying drawings, in which:

Figure 1 is a perspective view of my improved oil burning attachment for stoves; Fig. 2 is a sectional view thereof with parts in side elevation; and, Fig. 3 is an enlarged detail sectional view of the nozzle portion of the device.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

35 The burner 1 of my improved oil burning attachment consists of a tube adapted to be inserted within the fire box of a stove and preferably of a length approximating the length of the fire box, and said burner is formed with apertures 2, preferably arranged in two rows, as shown, and formed with flame jets or outlets. At one end the burner 1 is provided with a screw cap or other detachable closure 3 which may be removed in order to clean the burner and at its other end said burner tube is connected, as by an elbow, or the like, 5 to an upwardly extending tube or pipe 4 constituting a mixing chamber. To the upper end of the tube 4 a T-coupling 5 is connected, and to the lateral branch of said T-coupling there is secured a laterally extending air inlet pipe 6.

0 The oil supply pipe 7 may lead from an oil tank or reservoir, or any other suitable source of supply (not shown) and is provided with a controlling valve 7^a, and is connected to the inlet branch 8 of the generator. The generator embodies two branch pipes 9 and 9^a,— 5 extending vertically parallel with the mixing chamber and comparatively close to the same, and the pipe 9 is

connected by an elbow or the like to the inlet branch 8 at one end and at its other end to the lateral branch 10. The pipe 9^a is in turn connected to a branch 10^a extending parallel with the branch 10 and coupled thereto by an elbow and an intermediate coupling and said branches 10 and 10^a lie close to and on opposite sides of the burner tube 1, so as to receive the heating effect of the jets of flame issuing out of the orifices 2.

To the delivery branch 9^a of the generator coil, a 65 goose-neck 11 is secured, and to the extremity of said goose-neck there is attached a preferably swivel nipple 12 adapted for attachment to the nozzle 13, by means of reducing bushings 14. The nozzle 13 is mounted within and points downwardly within the T-coupling 5 and is provided with a tapered extremity 15 producing a small orifice for the gas.

A support for the several pipes forming my improved oil burner attachment comprises a base plate 16 which is adapted to replace one of the ordinary lids of the 75 stove, and an elevated plate 17 which is preferably flat, as shown, and which is secured to the base plate 16 by means of pipes or other connecting rods 18.

In the practical operation of my improved burner attachment, the burner 1 is inserted through a lid opening of the stove and rests within the fire box of the stove, and preferably upon a pan 19 which is adapted to contain brick-dust or the like, saturated with oil for the initial lighting of the device. After the burner tube 1 and the generating coil have been sufficiently 85 heated by the initial burning of the oil in the pan 19, the valve 7 is opened and the oil is admitted in the generator and as it passes therethrough, the gas is generated from the oil and the gas issues through the orifice of the nozzle 13 down to the mixing chamber constituted by the pipe 4, and as it passes through the mixing chamber, the gas is mixed with air which is drawn in through the pipe 6 by a suction draft. As the pipe 6 communicates with the T-coupling 5 above the outlet orifice of the nozzle 13, it is evident that the suction 95 draft produced will effectively mix the gas with air and promote the thermal efficiency of the fuel. This mixture will then manifestly continuously flow to the burner 1 and issue through the orifices 2 thereof where it will be ignited and serve continuously to so heat the 100 generator as to continually generate the gas.

It is to be particularly noted that the base plate 16 fits the lid opening and replaces one of the lids of the stove top, while the plate 17 which comes down closely over the goose-neck 11 may serve as a warming or heating 105 pan for cooking utensils, while at the same time the construction of the support with its upper and lower plates, forms a housing or protecting medium for those portions of the device between the plates. The T-coupling 5, air inlet pipe 6, goose-neck 11, oil inlet pipe 110 8, and the upper ends of the branches 9 and 9^a of the generator coil are all located above the base plate 16,

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and the said pipes 7 and 8 extend laterally over the edge of the stove so that the valve 7^a will be kept cool at all times and be easy to handle.

Having thus described the invention, what is
5 claimed as new is:

10 An oil burner attachment for stoves, consisting of a support embodying a base plate and an upper plate spaced therefrom and connected thereto, the base plate being adapted to fit the lid opening of a stove top, a T-coupling mounted between said plates, an air inlet pipe connected to said T-coupling, a mixing tube extending upwardly through said base plate and connected to the T-coupling and suspended therefrom and from said base plate, a

burner tube connected to said mixing tube and provided with outlet orifices for gas, a generator coil embracing said mixing tube, the base of the coil extending upwardly from said base plate and being supported thereby, an oil inlet pipe extending over the upper face of said base plate and connected to said generator coil, and a gas nozzle connected to the other end of said generator coil and extending downwardly within the said T-coupling. 15 20

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

HARVEY N. CROSSLEY. [L. S.]

Witnesses:

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