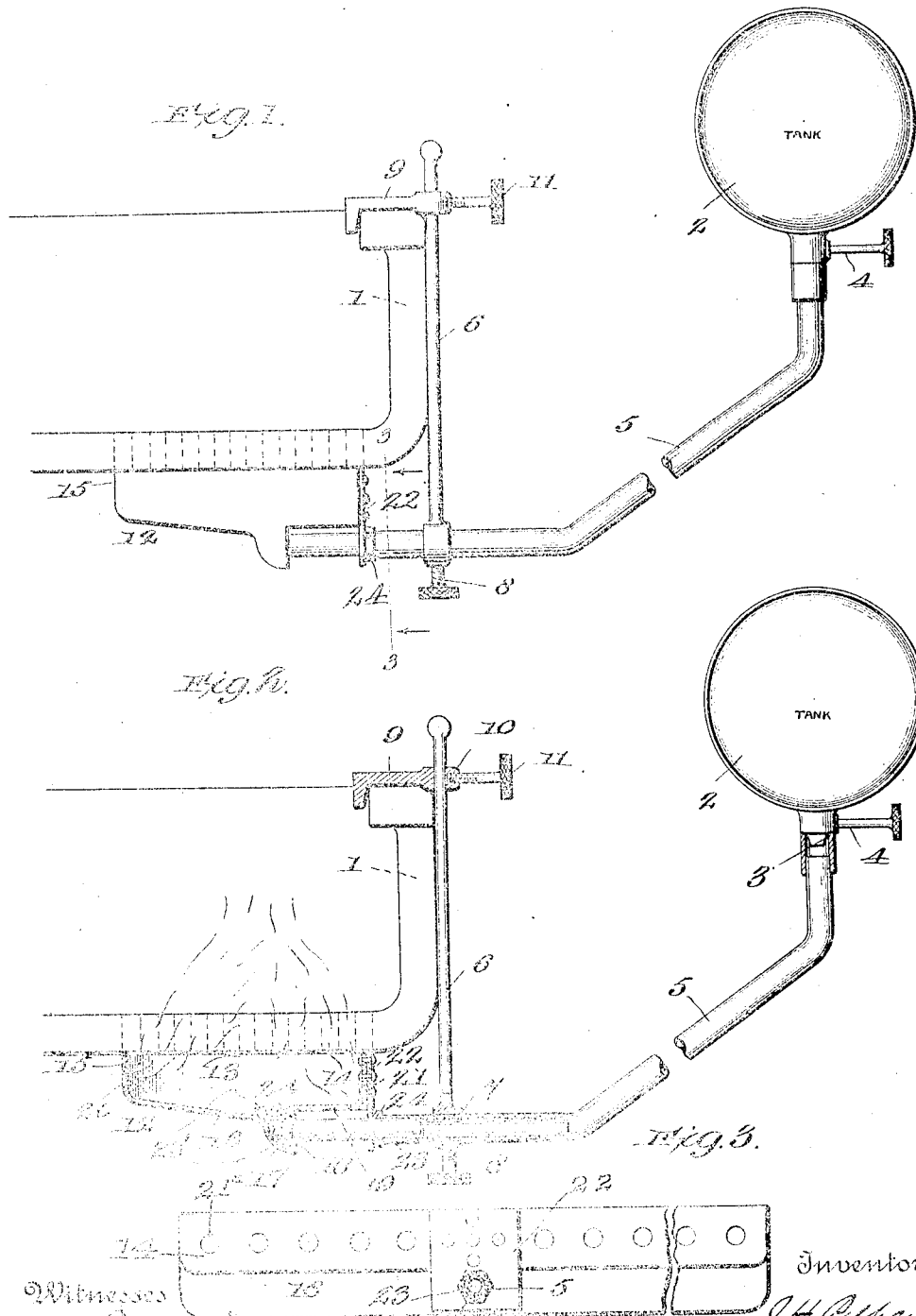


No. 876,227.

PATENTED JAN. 7, 1908.

J. H. PELHAM.  
FIRE KINDLER.

APPLICATION FILED JULY 13, 1907.



Witnesses

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# UNITED STATES PATENT OFFICE.

JOSEPH H. PELHAM, OF SCRANTON, MISSISSIPPI.

## FIRE-KINDLER.

No. 876,227.

Specification of Letters Patent.

Patented Jan. 7, 1908.

Application filed July 13, 1907. Serial No. 383,568.

*To all whom it may concern:*

Be it known that I, JOSEPH H. PELHAM, a citizen of the United States, residing at Scranton, in the county of Jackson and State of Mississippi, have invented certain new and useful Improvements in Fire-Kindlers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention comprises means for starting a fire, and broadly consists in initially introducing within a heating chamber below a grate a hydrocarbon oil, igniting said oil for heating said chamber, and subsequently introducing more oil to the then-heated chamber and also air, and thence passing the carbureted product in a burning flame through the coals in the grate.

It will be understood that the invention by slight modifications may be made applicable to any kind of fire, whether in an open grate or otherwise, but for simplicity of illustration the same is shown and described as applied to an open grate. It will also be understood that while I do not limit myself to the exact details of construction shown and described, still for the purpose of disclosure reference is had to the accompanying drawings illustrating a practical embodiment of the invention, in which like letters designate the same parts in the several views, and in which—

Figure 1 is a side elevation of my device applied to an open grate. Fig. 2 is a vertical section through the device, parts being shown in elevation, and Fig. 3 is a section on the line 3—3, Fig. 1, looking in the direction of the arrows.

1 designates a grate, 2 a tank for the hydrocarbon oil provided with a discharge nipple 3 controlled by a needle valve 4, the pipe 5 forming a communicating conduit between said tank and the heating chamber hereinafter referred to. The lower end of the pipe 5 is preferably horizontally disposed, and connected to said pipe is a hanger bar 6, apertured at its lower end, as at 7, to receive said pipe 5, said apertured lower end being provided with a set screw 8 for adjustably connecting said hanger bar on said pipe. Any suitable clamping means may be provided for supporting said hanger bar in position, but in illustrating the device as applied to an open grate, in the drawings I

have shown the upper end of the vertical hanger bar 6 as being provided with a clamping member 9, adapted to fit over the upper bar of the grate 1, which clamping means is vertically adjustable on said bar 6 by means of the apertured end 10 and set screw 11.

12 designates a pan for forming a heating chamber 13 below the grate. This pan is of elongated form, comprising a front wall 14, a rear wall 15 and side walls. The top of the pan is open, and the bottom thereof is provided with the inclining rear portion 16 terminating in a depending trough, having a curved rear wall 17 and a vertical front wall 18, the forward portion of the bottom of the pan being formed by a horizontal portion 19 extending between the lower and upper ends, respectively, of the front wall 14 of the pan and the front wall 18 of the trough. The pan on its rear wall is provided with a plurality of air inlets 20, and the vertical front wall 14 is similarly provided with a plurality of air inlets 21 or instead the horizontal bottom portion may be so provided as at 21. In order to rigidly support the pan, I also provide a forward brace comprising a metallic plate 22 securely affixed to the front wall 14, as by rivets, and projecting downwardly forward of said trough. The front wall of the trough and also the depending plate 22 are apertured to receive a short length of pipe 23, the inner end of which may be in the form of a nozzle and projects within the trough portion of the pan in such a manner that the incoming oil is sprayed against the inclining bottom of the pan. The outer end of the short length pipe projects beyond the plate 22 and may be screw-threaded to receive the end of the pipe 5. The short length of pipe may also be held in position in any suitable way, as for instance by the jam nuts 24.

Any suitable means may be provided for igniting the oil trough. A simple construction is the asbestos lighter 23', as shown in the trough adjacent the nozzle end of the pipe 23.

From the foregoing, it will be seen that in operation, the device being secured in position, a small quantity of oil is introduced into the trough and ignited. The flame from this burning oil will heat the walls of the pan to such an extent that the chamber 13 is maintained in a highly heated state, and upon the introduction of a controlled flow of

oil through the pipe 5 into the pan, the same becomes vaporized and mixed with incoming air, and the carbureted product is conducted through the coals in the form of a highly heated flame.

From the foregoing, it will be observed that I provide a device which may be readily affixed to or detached from the grate, and which is a reliable and quick kindler for a coal fire.

What I claim is:—

1. The combination with a pan having a downwardly disposed rear base portion terminating in a depending trough, an ignition means in said trough, the forward base wall of said pan extending in a horizontal plane above said trough, air inlets being provided in the rear and in the forward portion of said pan, of means for introducing a hydrocarbon oil to said pan, and means for supporting said pan below a grate, substantially as described.

2. The combination with a pan forming a heating chamber, of an ignition means in the pan, an oil supply tank, a pipe connection between said tank and said pan, and means for securing said pan beneath the grate, comprising a hanger bar supporting said pipe connection, and provided at its upper end

with an adjustable clamping member, substantially as described.

3. The combination with a pan having an inclined rear base wall terminating in a depending trough and provided with air inlets, the front wall of said trough shaped member being apertured, of a brace member comprising a depending plate secured to the front wall of said pan and provided in its depending portion with an aperture alining with said trough aperture, a pipe passing through said apertures and forming a nozzle within said trough, a tank, a valve for said tank, a pipe communicating with the valved opening of said tank at one end, and at its other end connected to said first-mentioned pipe, and means for supporting said device with said pan beneath a grate comprising a bracket consisting of an arm adjustably connected at one end to said last mentioned pipe and at its other end provided with an adjustable clamp, substantially as described.

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

JOSEPH H. PELHAM.

Witnesses:

L. D. WALTON,  
J. A. PELHAM.